

Crowdfunding & Architectural Practice.

A Testing Ground for Homestay-Hotel in China

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Abstract

Young architectural practices are short of building opportunities, with limited knowledges of the production chain and access to potential investors among the relevant monetary aspects that deprive them from the practice of architecture as “the act of construction” (Bernstein, 2014: 19). Mobile Internet platforms, however, may provide new frames to reimagine responsibilities and risks of the profession. Wee Studio experimented architectural crowdfunding in China as a financial model that questions the need for a conventional client, supporting instead architectural projects by means of individual investments in small amounts of money. Crowdfunding initiatives spread rapidly among Chinese social network users, thanks to the WeChat platform – whose power in multiplying the popularity of the idea and easiness of online payment made the Treehouse project possible. Design and construction of a pair of wooden huts that complement a homestay-hotel in Miyun (Beijing) were completed between November 2015 and September 2016.

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DOI:

10.17454/ARDETH03.13

ARDETH#03

The Business Model

The initial idea was to redefine the relationship between the output of architectural work and the need of a client, identified as the owner of the final property or the one investing in its construction. Therefore in this particular project a conventional client cannot be identified, and there are multiple owners and countless contributors instead. In crowdfunded architecture, designers take responsibilities and assume some risks to see their project built, without counting on a contracted fee for their intellectual and operative work. Architects are in control of costs across the entire chain of architectural production and manoeuvre budget constraints according to the available resources that their design can mobilize.

The “Business Model” diagram explains the structure of crowdfunding in the Treehouse case. The three black figures represent the critical components of this business model, which are, who: the background and motivation of our team; what: the prospect of our project and related details; how: the funding goals and rewards for investors. A video in company with text and pictures conveyed the final narrative of the business model and was posted online through a professional crowdfunding platform, which served as the supervisor of the entire operation. Based on different levels of interactions between prospective investors and the project design, six funding options were defined, which ranged from 100 RMB to 10,000 RMB.

Money Flow

The “Money Flow” diagram bridges money and geography while illustrating how the money was raised. Each contributor is pinned on the map to locate the origin of funders and connected to a specific amount of money which are assorted in a grey scale and arranged in chronological order. The co-builders who invested the most money and also own part of the project are highlighted as gradient columns. The rest of investors who contributed to the initial goal of 50,000 RMB are highlighted as translucent thick grey lines. The initial goal was achieved in less than three hours since the project was launched online, because most of co-builders were in Stage One. In fact, the openings for co-builders were ‘hot sells’ and run out of number before other people could get it.

Most of investors and all of the co-builders are from the four most developed urban areas in China: Beijing, Shanghai, Guangzhou and Shenzhen. Coincidentally, according to the housing price rank in 2017, these are exactly the top four areas with highest cost per square meter (Beijing 67,822 RMB/sqm, Shanghai 52,584 RMB/sqm, Shenzhen 50,900 RMB/sqm, Guangzhou 40,030 RMB/sqm; CASS, 2018). For sure young people prefer to live and work in these regions, so we assume the anxiety of living under the high housing pressure, without forgetting a concentration of interests in architecture-related initiatives and social media trends, was the main reason why most investors were from these cities. Besides, Beijing has the most pins because it is where the site is located. The

project of Treehouse showed them a way of getting rid of crowded urban concrete forest, and, moreover, provided a place of their own with spiritual luxury and physical closeness to the nature. Also Lao xiang networks play a role: Lao xiang stands for the relations and bonds that people from the same village, town or province in China usually rely on for starting new businesses. As Hunan Province highlighted on the map shows more points than other regions, the cause for that are the local connection of the project initiator, Haifei Dai, whose hometown is there and whose previous work for a self-build egg house had gained reputations.

Construction Cycle

The “Construction Cycle” diagram illustrates how and where the money was spent. A sequence of construction stages is coiling around the plan of the Treehouse from inside out. The days and actual costs of each stage are aligned together in this circular timeline.

The matrix on the left represents detailed costs in three categories: materials, products and manpower. Except for the high costs of steel structure and wood panels, which are the main material of the cabins, we can find that quite a lot of money were spent on special needs such as floor and plumb heating systems and a freeze-proof steel plumbing system. These special needs were not part of the initial plan: as the crowdfunded money surpassed our expectations, the complexity of facilities and details were brought to a new level. More visitors and greater popularity gave us the requirement of including a shower/toilet unit and making sure it is functional during the early winter of Beijing.

Some Open Issues

In the end, we successfully raised 177,953 RMB – more than three times our initial goal. Nevertheless, what transcends this number was a transient community based on this crowdfunded project. The Treehouse had become not only a site where people could participate the process of architecture, but also a place where people could interact with each other. It turns out crowdfunding works through not only one single piece of architecture but also the very essential meaning of place – where people talk and enjoy the space.

This is a meaningful architectural experiment for all of us, but some issues still remain to be discussed in the future. On one hand, the ownership of the house could be crowdfunded but land property requires more careful considerations. In this case the land use right was rented by our team for 20 years and operated by the hotel manager member, in agreement with the Chinese legal framework. We believe there could be more creative ways to be explored in the future. On the other hand, the value of the architects’ labor was never counted into the construction cost cycle. As an experiment, we were happy to see everyone was enjoying this project and the result of the built cabins, but a more sustainable way needs to be developed to make it a truly new architectural practice

model. If we are to consider the economies of the project seriously in the practice of architecture (Bernstein, 2014), crowdfunded architecture works in the direction of connecting ‘design value’ to what individuals put money in with reference to an architectural project (Gray, 2014). Questions remain open on who is entitled to capture and redistribute the additional value, once the crowdfunding lifecycle is over, to avoid the ‘design value’ being reduced to a product of consumerism.

Acknowledgements

The author of this article collaborated with Wee Studio in Beijing on this project during 2015-2016.

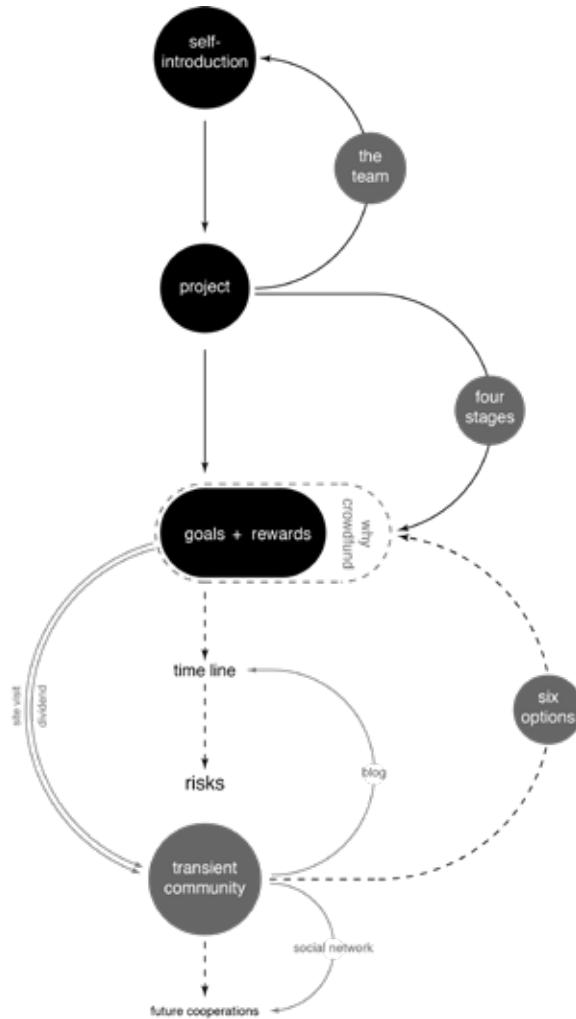
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Fig. 1 - Business Model.

Narrative

Payback



The team

- DAI Haifei**
Founder of Wee Studio in Beijing.
- ZHANG Yanping**
Co-founder of Wee Studio in Beijing. Graduated from China Academy of Art. Three years' working experience in ZAO/Standardarchitecture. Focusing on cultural/creative space.
- CHENG Dajun**
Founder of Ai Qiu Shan Ju; Experienced hotel manager.
- ZHAO Sheng**
Architect; graduated from Tianjin University; Master of Architecture (2021) Harvard University Graduate School of Design.

Four stages

- Stage One**
Target Amount: 50,000 RMB
Assembling steel structures on site, installing exterior facade and interior panels.
- Stage Two**
Target Amount: 100,000 RMB
Finalizing interior details, completing plumbing system in the shower unit.
- Stage Three**
Target Amount: 150,000 RMB
Improving surrounding area's landscape (installing pavement and dredging the stream)
- Stage Four**
Target Amount: >150,000 RMB
Realizing another unit near the site.

Six options

Meet the Treehouse

Invest Amount: 100 RMB

Payback:

- Free mountain spring tea experience in the Treehouse.
- One accommodation voucher in 150 RMB, applying to check in for both Treehouse and the hostel next to it (welcome to walk-in when it applies and it's free to use multiple vouchers in one purchase).
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- One package of Treehouse postcards.
- * Availability: limitless
- ** Delivery: Delivery: from 30 days after crowdfunding ends

First to live in the Treehouse

Invest Amount: 299 RMB

Payback:

- One free accommodation voucher, enjoying the priority to experience the Treehouse including three meals a day (except national holidays). The Treehouse is capable of accommodating two adults and a child. (Non-holiday price would be 680rmb and weekend & holidays price would be 980rmb.)
- 200ml fresh handmade apricot kernel oil.
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be updated to you.
- * Number limitation: 100 persons
- ** Delivery begins 30 days after ending of crowdfunding.

Build the Treehouse

Invest Amount: 599 RMB

Payback:

- One day co-building experience with us during construction period, three meals a day provided.
- One free accommodation voucher, enjoying the priority to experience the Treehouse (price: as before).
- 200ml fresh handmade apricot kernel oil.
- One home-made grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be

updated to you.

* Delivery begins 30 days after ending of crowdfunding.

Deeply experience the treehouse

Invest Amount: 2000 RMB

Payback:

- Lifelong 10% discount of the Treehouse and Ai Qiu Shan Ju Hostel reservations.
- One free accommodation voucher, enjoying the priority to experience the Treehouse (price: as before).
- 200ml fresh handmade apricot kernel oil.
- One home-made fresh food grain package from Hua Yuan Village (800g, combination of millet, corns, broomcorn, chestnut).
- Your name would be recorded in Treehouse co-builders' booklet, and the construction progress would be updated to you.
- * Delivery begins 30 days after ending of crowdfunding.

Be the co-builder

Invest Amount: 5000 RMB

Payback:

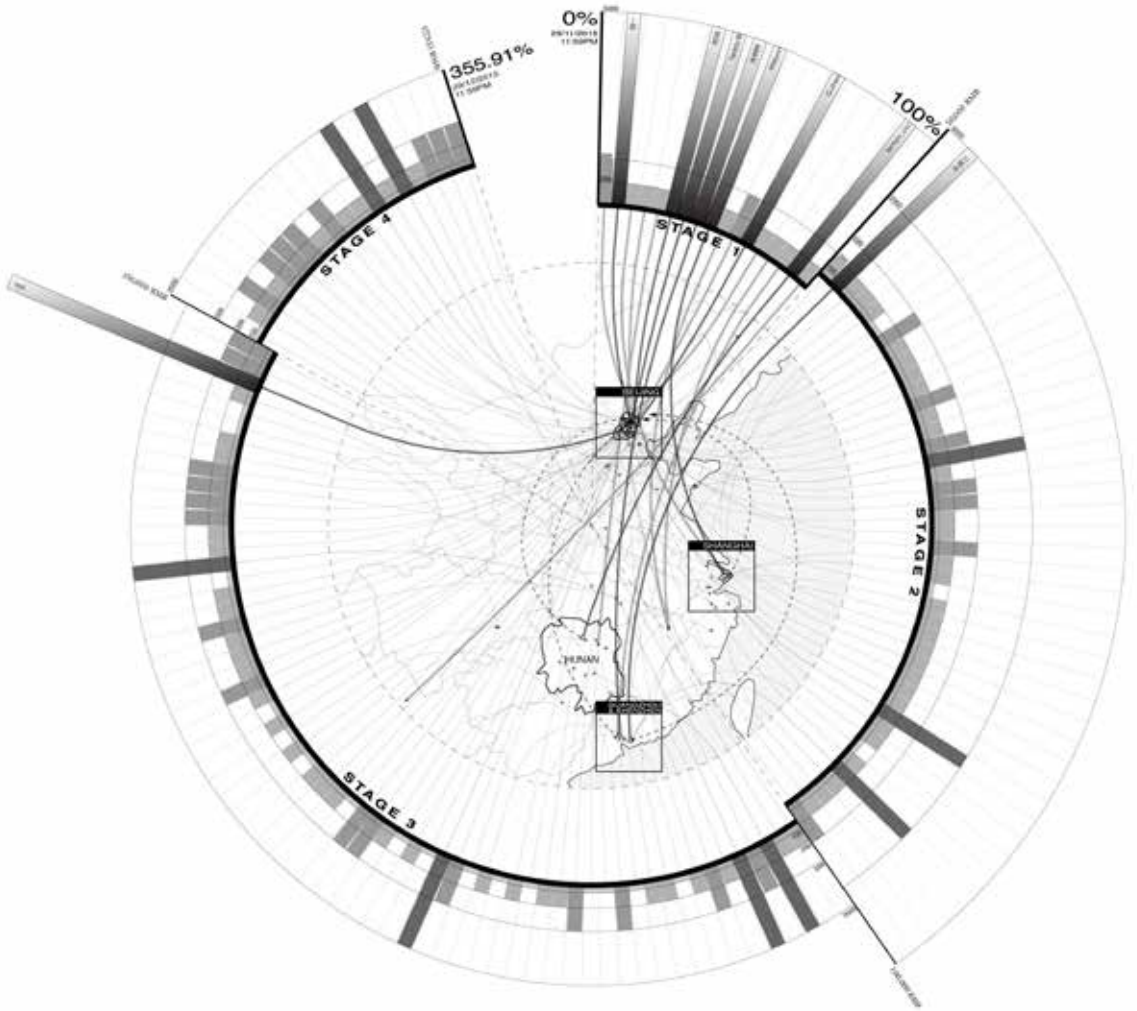
- Become a co-builder of the Treehouse.
- Be included into the shareholder's board. Share 5% of participation in annual profit of the Treehouse running as part of hostel. Two years later you can either choose to cash back the principal or purchase the stock right.
- Lifelong 20% discount for you or your friends in the Treehouse reservations.
- the Treehouse wooden model
- 10kg local fruit package and food grain package per year.
- * Amount limitation: 8
- ** Delivery begins 100 days after ending of crowdfunding.

DIY a Treehouse

Invest Amount: 10000 RMB

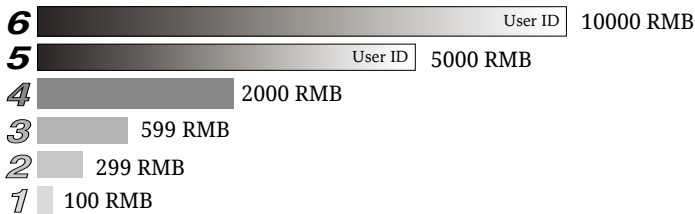
Payback:

- DIY your own Treehouse, the investing money works as the deposit fee for reserving the service. You can have your own customized Treehouse located in your backyard or community.
- After the crowdfunding period we will contact you. The final payment would be 100,000 RMB including the deposit fee, it incorporates the designing fee and construction & material cost.
- The whole period from design to product would be three months.
- * Amount limitation: 5
- ** Delivery begins 100 days after ending of crowdfunding.



Legend

- ▬ Main Donor_Opt 6
- ▬ Main Donor_Opt 5
- Supporter_Opt 4
- Supporter_Opt 3
- ▶ Supporter_Opt 2
- Supporter_Opt 1
- ⋯ Site Visit
- First Stage Donor



(above)
Fig. 2 - Money Flow Diagram.
 This diagram shows that in one month time period, how much and how fast the funds were raised from the Internet. Each column in a grey scale representing each person from the Internet relating to a specific location and amount of investment within the structure of our business model.

Fig. 3 - Funding options.

MATERIAL



#M01 Steel Structure
-Material+Assembling
-Total=30000



#M02 Wood Stud
-3x5 UnitPrice=45
Total=45x2=90
-2x3 UnitPrice=15
Total=15x10=150
-Total=240



#M03 Oriented Structure Board
-9MM UnitPrice=70
Total=70x45=3150



#M04 Recycled Wood Panel
-Multiple finish
-Total=10000



#M05 Plywood Panel
-9MM UnitPrice=140
Total=140x15=2100



#M06 Merbau Wood Panel
-1500x90x20 UnitPrice=25
Total=25x240=6000
-2100x90x20 UnitPrice=20
Total=20x50=1000
-Total=7000



#M07 Carbonized Wood
-90MM UnitPrice=10
Total=10x20=200
-4x6 UnitPrice=22
Total=22x13=286
-Total=486



#M08 Waterproof Paint
-BLK UnitPrice=350
Total=350x8=2800



#M09 Insulation Panel
-4MM UnitPrice=5.5
Total=5.5x100=550
-4MM UnitPrice=6.5
Total=6.5x100=650
-Total=1200



#M10 Clear Finishing Paint
-EX UnitPrice=220
Total=220
-IN UnitPrice=150
Total=150
-Total=370



#M11 Glass
-A UnitPrice=800
-B UnitPrice=800
-C UnitPrice=2000
-Total=3600

PRODUCT



#P01 Septic Tank
-GLASS FIBER STEEL
1 TON SIZE
UnitPrice=800
Total=800



#P02 Tatami
-3.5CM NO EDGE
YELLOW
UnitPrice=480
Total=480x3=1440



#P03 Stainless Steel Plumbing System
-SPECIAL CONNECTION
LOW TEMPERATURE
PROOFING
Total=3000



#P04 Plumbing Heating System
-WIRE UnitPrice=6
Total=6x55=330
-MODEL UnitPrice=830
-CPU UnitPrice=100
-Total=1260



#P05 Floor Heating Units
-DUAL DIRECTION
Total=830



#P06 Plumbing Hardware
-SHO UnitPrice=70
-BAS UnitPrice=50
-Total=120



#P07 Cabinet Hardware
-SM UnitPrice=67.4
-DOR UnitPrice=141.5
-DOR UnitPrice=461.7
-Total=970.6



#P08 Wall-mount Sockets
-9X9 GOLDEN
UnitPrice=45
Total=45x10=450



#P09 Toilet
-WHI DIAMOND
UnitPrice=1600
Total=1600



#P10 Faucet
-OXO STEEL
UnitPrice=900
Total=900



#P11 Shower Set
-SUP UnitPrice=70
Total=70x2=140
-SWITCH UnitPrice=150
-HEAD UnitPrice=450
-Total=740



#P12 Folding Curtain
-TRANSLUCENT
UnitPrice=1200
Total=1200



#P13 Water Heater
-ELEC STORAGE
UnitPrice=4500
Total=4500



#P14 Customized Basin
-WHITE CORIAN
UnitPrice=2000
Total=2000

MANPOWER



#MP01 Carpenter
-UnitPrice=300
Total=300x51x2
=30600



#MP02 Electrician
-UnitPrice=300
Total=300x3
=9000



#MP03 Plumber
-UnitPrice=300
Total=300x2
=600



#MP04 Helper
-UnitPrice=100
Total=100x15
=1500

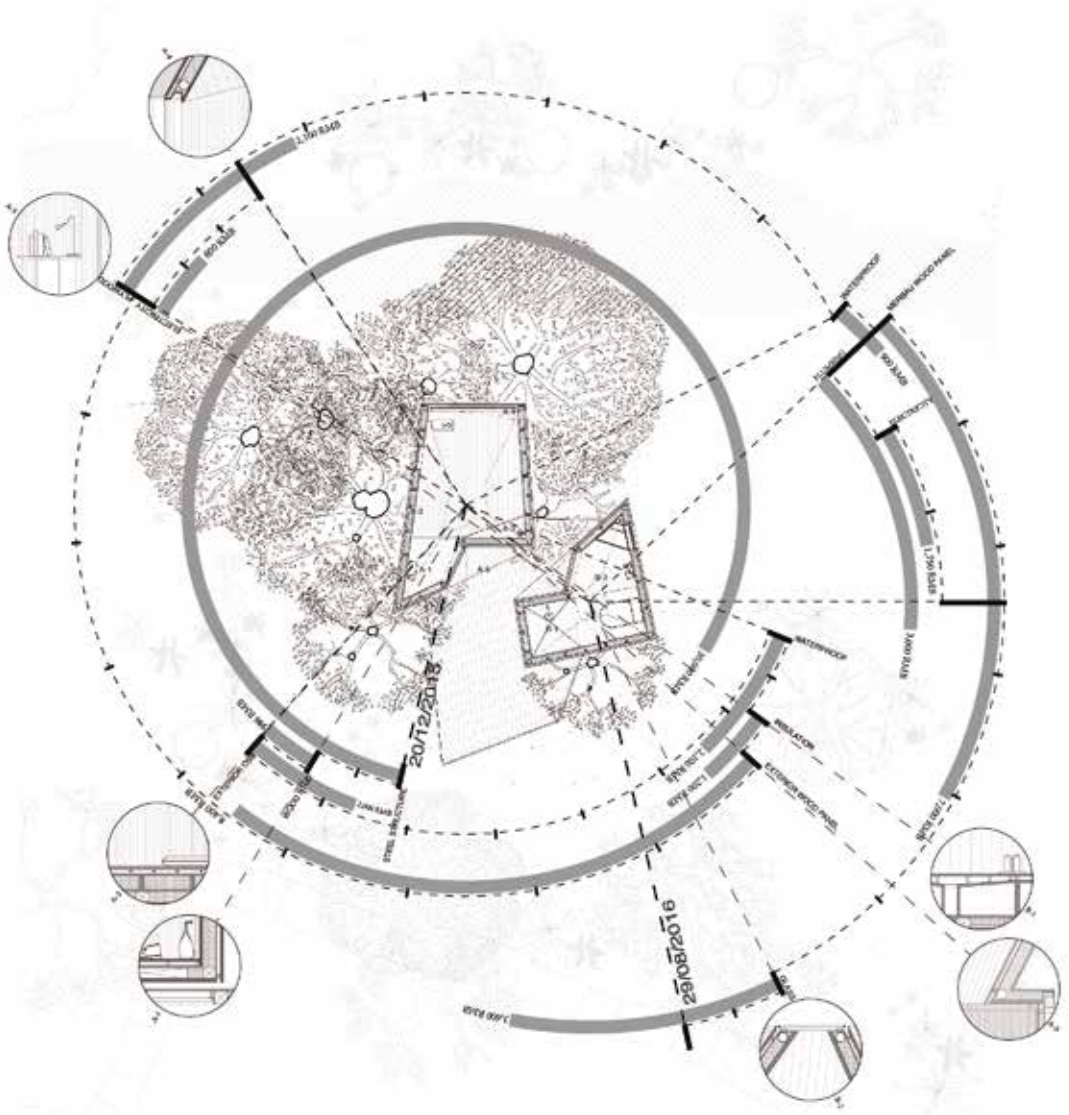


#MP05 Painter
-UnitPrice=400
Total=400x2
=800



#CODE
Name
-TYPE UnitPrice
Total=UnitPrice x Number

Fig.4 - Construction Cycle Diagram.



Legend

- Construction Node
- Total Amount of Money
- - - Construction Period (manpower*time)
- - - Beginning/Ending Date