

FARMING IN AN ONLINE WORLD
Rethinking the agricultural landscape in Lishui Valley, China

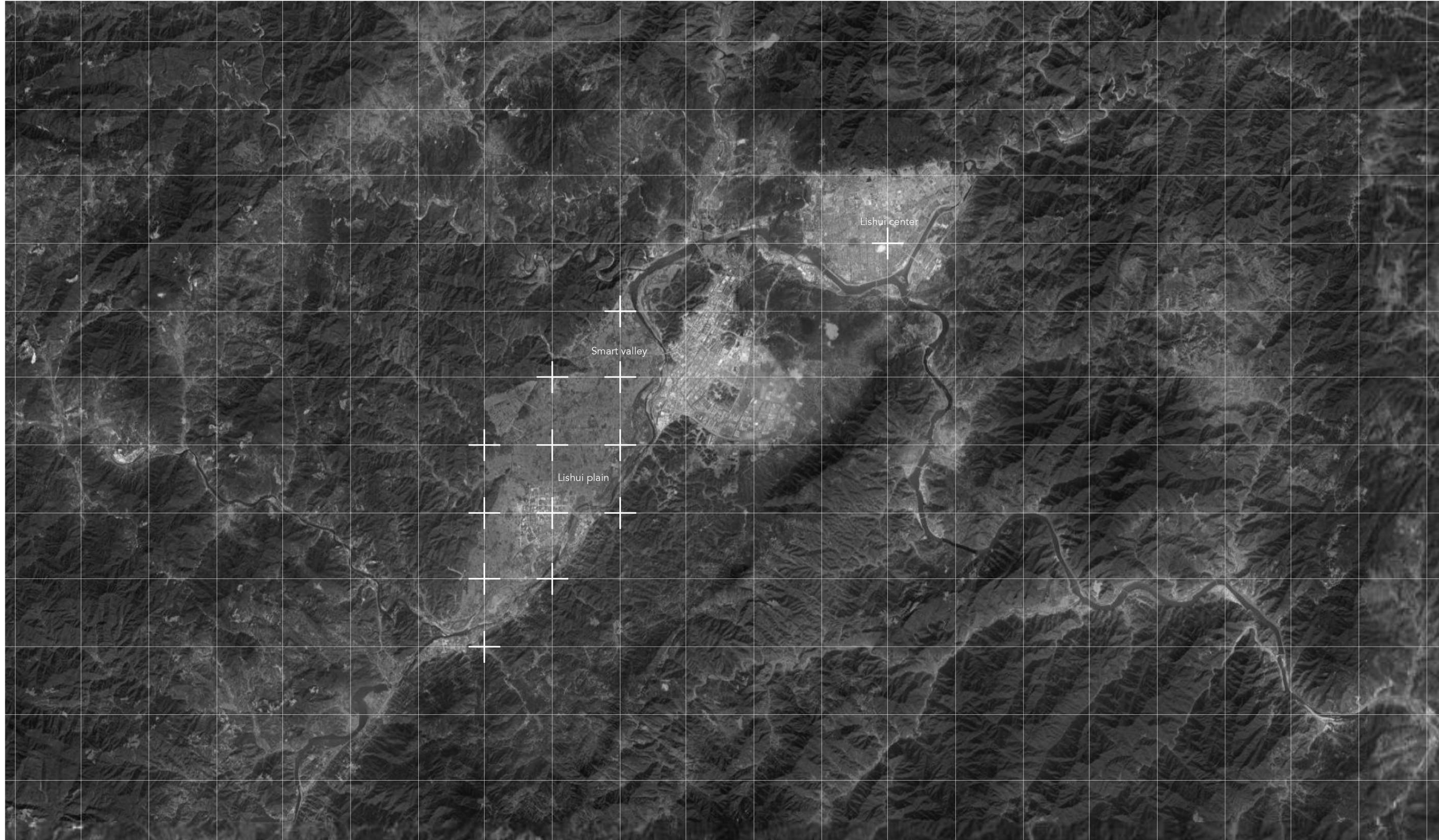
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Site Satellite Image 2021 TerraMetrics, Google Maps data @2021 0 2km

Our research seeks to investigate the changing relation between rural agricultural production and consumer consumption, framing this within the general development of China's Internet economy. The research focuses on the live broadcast of agriculture on the Internet, the transformation of farmers' identity and the logistics process before the delivery of agriculture.

Our project is based on the Lishui Plain, in the eastern coastal province of Zhejiang, China. This area is characterised by rich natural agriculture resources. However, the sharp decline in agricultural cooperatives and product trading markets has exacerbated the phenomenon of local farmers' abandonment of farming. Conforming to the trend of online celebrities directing agricultural products in the Internet era, this strategy attempts to change the identity of farmers by changing the supply chain of agricultural products after large-scale farmland and provides new possibilities for the revival of local agriculture.

In the thesis it is proposed a live broadcast logistics system for agricultural products and a traditional agricultural product processing system. On the one hand, it would connect farmers to the big market through the e-commerce platform, this to increase farmers' agricultural income through online sales of agricultural products. On the other hand, it promotes rural traditional processing methods, this to maintain traditional agricultural daily habits.

02.0/ INTRODUCTION AND RESEARCH

Since 2000, the People's Republic of China (China) has followed the development trend of developed countries such as the United States, Europe, and Japan, and has rapidly integrated Internet technology into all aspects of the economic and social fields. In recent years, with the rapid development of Internet information technology, the number of Internet users in China has continued to increase, and it has become the country with the largest number of Internet users in the world.

Since the reform and opening up, China's economy has developed rapidly, and by 2010 it has become the world's second largest economy. From 1978 to 2012, the average annual growth rate of China's gross domestic product (GDP) was about 10%. From 2013 to 2016, as the Chinese economy shifted from rapid growth to medium-speed growth, the annual GDP growth rate dropped to around 7%. In 2016, in order to promote economic restructuring and development, the Chinese government launched the "Internet + Economy" model. This model combines Internet technologies such as Internet of Things (IOT), cloud computing, and big data with traditional industries. Internet information technology, as a great economic engine, realizes information sharing, reduces costs, improves efficiency, and promotes different industries. Innovation and integration.

Since China's reform and opening up in 1978, although the production units of the agricultural sector are generally small and highly dispersed, the contribution of agriculture to the national economy is enormous. The average size of farms in China is less than 1 hectare, which is many times smaller than the average farm size of OECD member countries¹. This difference has a profound impact on technology choices, especially in terms of reliance on the degree of mechanization, infrastructure, and other important economies of scale.

Since production has always been the focus of family operations, the service links in the value chain have been neglected, resulting in high production costs and low profit margins, and farmers are at a disadvantage in market competition. The uncoordinated behavior of stakeholders in the value chain has caused problems such as non-point source pollution and food safety issues. Agricultural production activities are sometimes not friendly to the environment, they also have hidden dangers to public health, and lack accountability and traceability.

Since the beginning of the 21st century, with the rapid development of China's Internet technology, Internet + technology has had a significant impact on the national economy and rural economy. The Internet has huge advantages, and there is an urgent need to integrate, transform and upgrade the rural economy, especially the agricultural industry chain, leisure agriculture, and the agricultural social service system.

1. X. Ji, S. Rozelle, J. Huang, L. Zhang, T. Zhang, 2016. Are Chinese farms growing? "China and the World Economy", 24, 41-62.



Resource: Agriculture and natural resources: Access to rural finance, technology, and markets information and Communications Technology, ADB, 09/2018, <http://dx.doi.org/10.22617/TCS189615-2>

02.1/ Agriculture + Internet

When Internet meets Rural Economy of China

China's agricultural production system is characterized by "small scale" and "highly dispersed". China's family-based production model focuses on the production link and does not pay attention to other links in the value chain. There are problems such as high production costs, low profit margins, non-point source pollution, and food insecurity, which put farmers at a disadvantage in market competition. After entering the 21st century, China's Internet technology has developed rapidly, and a series of "Internet +" technologies have been produced, which have a profound impact on the entire economic system and spread to the rural economy. The Internet has played a huge advantage in the integration, transformation and upgrading of the rural economy, especially the agricultural industry chain.

· Overview of the Internet + Rural Economy of the People's Republic of China

"Internet + rural economy" refers to an economic phenomenon that uses Internet information technologies such as mobile Internet, Internet of Things, cloud computing, and big data to improve the efficiency of rural economic sectors, including promoting the production, processing and trade of agricultural products; improving agricultural social services (Agricultural finance, agricultural precision operation, technical services); promote leisure agriculture and rural tourism; improve farmers' daily consumption levels.

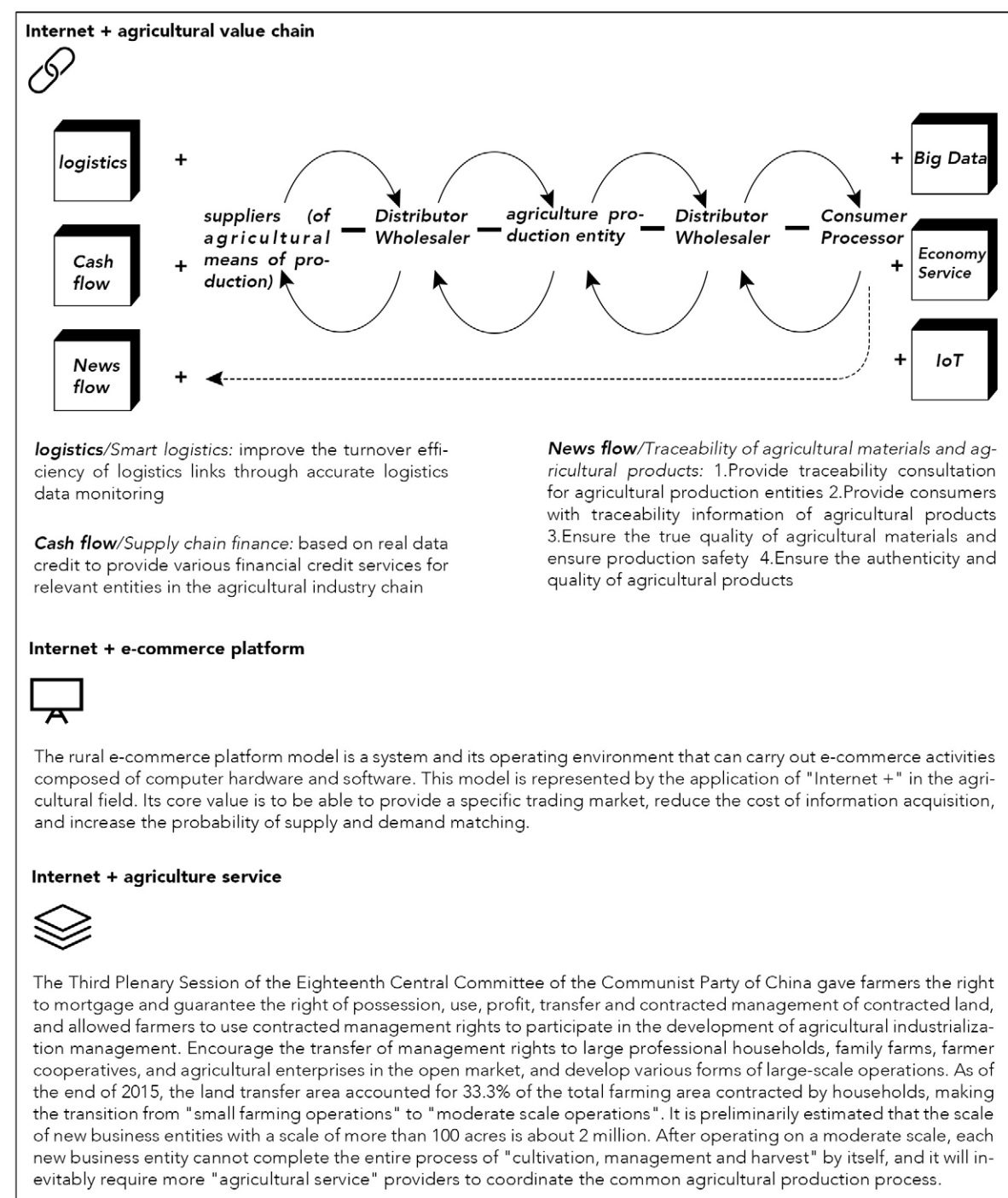
Internet + rural economy has become an important part of China's Internet + economic blueprint. This is because the application of Internet technology to the rural economy has promoted the transformation and upgrading of traditional industries into modern ones, and improved rural productivity and efficiency. Secondly, Internet technology has overturned the traditional concept of time and space, making the space distance smaller, the length of time shorter, and the information more symmetrical. This helps provide fast, real-time and reliable information about agricultural production, and promotes the local and global sales of high-quality agricultural products. Third, Internet technology provides new opportunities for rural entrepreneurship and innovation, and stimulates the enthusiasm of young people to actively participate in rural e-commerce entrepreneurship. Finally, "Internet+" connects smallholder farmers with the modern economic system through electronic information, provides them with more economical and effective agricultural products sales channels, promotes the increase of farmers' income, and helps farmers get rid of poverty and become rich.

· Internet + rural economic development model

Internet + agricultural value chain, Internet + e-commerce platform, Internet + agricultural services. The degree of application of the Internet in the agricultural field can be roughly summarized as: life>circulation (trade)>production. In the early stages of Internet use, when China's Internet penetration rate increased from 15% to 50%, farmers had already used the Internet for entertainment and information, and even for online payments. The Internet has also affected the entire agricultural value chain; however, its application is still in a transitional period.

These three models have varying degrees of Internet application in different regions. In the rural e-commerce platform model, the degree of application ranges from low to high: only sell core products (ubiquitous); establish a value chain (some

provinces); form an industrial ecology (very few provinces). The network environment and traceability characteristics of agriculture are currently in the trial and demonstration stage (such as online traceability of the production process, food safety, branding of high-quality agricultural products, etc.), safety, branding of high-quality agricultural products, etc.), and only sporadic cases were found during field inspections, and no large-scale operations were found. The brand is promoted and supported by logistics and financial services. In the production process, the application of the Internet of Things and big data technology is still limited to the field of cash crops, which is promoted by the government. The application of precision agriculture in the field of food crops is still rare.



Source: Guo dan, International Symposium on Using the Internet to Improve Agricultural Service System and Promote the Transformation and Upgrading of Agricultural Economy, 2017.

· Opportunities and constraints faced by farmers in the Internet age

Expansion of sales channels for agricultural products: E-commerce platforms provide consumers with a solution to the asymmetry of supply and demand, and also expand the distribution channels for agricultural products to increase the income of farmers, especially those living in remote and inaccessible areas.

Turn local agricultural resource advantages and product advantages into economic opportunities: The small planting area and low yield of some special agricultural products make it difficult to become large-scale agricultural production bases and form economies of scale. Therefore, economic benefits cannot be achieved under the traditional sales model. The application of the Internet has solved this problem. With the development of the Internet, small producers can concentrate on the Internet so that they can fight for better prices for their products. Obstacles in logistics, such as warehousing and transportation, are also resolved through e-commerce platforms to reach more customers and increase farmers' sales and income.

Adopting high-quality production and traceability systems: Many agricultural products traded online are typically characterized by high quality, high prices, and targeting mid- to high-end consumers. Online products are usually sold to individual customers in smaller quantities, but the packaging and postage are higher; therefore, these products require higher prices. If online agricultural products want to prove that their high prices are reasonable, they must have higher quality and characteristics. As consumers' demand for green and pollution-free food continues to grow, it is necessary to standardize the agricultural products sold online to better ensure their quality and safety.

Incorporate farmers into the entire agricultural industry chain: Farmers are generally in the production link of the industry chain, with low efficiency and a weak position. With the development of e-commerce, farmers can not only produce agricultural products, but also participate in the classification, processing, packaging, transportation, purchase, and sales of agricultural products. Farmers are not only fully embedded in the entire industrial chain, but also share the profits of these links in the industrial chain, which enhances farmers' profit margins.

Speeding up the brand building of agricultural products: For formal e-commerce platforms, products sold on the platform need to have brands, which accelerates the brand building of local agricultural products.

Application of the Internet of Things to agricultural modernization: The Internet makes it possible to use the Internet of Things to improve agricultural production efficiency. At present, the main users of the Internet of Things are mainly some relatively powerful agricultural enterprises. Their motivation for using the Internet of Things is mainly to replace labor costs in the future and to better control the quality standards of agricultural products.

Provide employment opportunities for farmers and disadvantaged groups: In rural areas, some disadvantaged groups such as poor households, the disabled, the elderly and women have fewer employment opportunities and limited sources of

income. The rural e-commerce industry chain includes product production, processing, sales, after-sales service and other links. The employment positions derived from provinces); form an industrial ecology (very few provinces). The network environment and traceability characteristics of agriculture are currently in the trial and demonstration stage (such as online traceability of the production process, food safety, branding of high-quality agricultural products, etc.).

Provide entrepreneurial opportunities for returnees, post-secondary students, and unemployed college students: return home migrant workers, post-secondary students (referring to the surplus labor force of poor families who have not graduated from junior high school or high school), and unemployed college students. The level is higher than that of ordinary farmers, younger, and better able to accept new things. It is a better-quality human resource in rural development.

Resource: Agriculture and natural resources: Access to rural finance, technology, and markets Information and Communications Technology, ADB, 09/2018

Internet + rural images

E-commerce platforms connect small farmers with large markets, and more and more agricultural products are sold online, opening up sales channels. A mobile phone and a selfie stick have become the "new farm tools" for poor households to get rid of poverty and become rich. Live streaming of goods has quietly emerged in rural e-commerce circles and has become a new way of consumer poverty alleviation.

Some provincial levels provide training on live broadcast, short video delivery and poverty alleviation models. The government believes that some farmers do not know much about some new forms of market sales and need more professional teams and leaders to impart knowledge, so as to stimulate the enthusiasm of the villagers and stimulate the endogenous motivation for poverty alleviation.

The government-led training center invites professional teams in the fields of directors, live broadcasts, makeup and other fields to serve as teachers to teach farmers, agricultural enterprises and cooperatives. The teachers teach students experience in short video editing, live broadcast sales skills, and clothing and makeup.

Here is a display of different villagers and the new agricultural trend in the era of Internet + agriculture in China.



Source from website

NongcunTaobao's huge advertisement in the countryside. Nongcuntaobao: Nongcuntaobao is a rural e-commerce platform established by Alibaba in October 2014 when it launched the "Thousand Counties and Ten Thousand Villages Plan", which is part of Taobao.com. Rural Taobao not only enriches farmers' shopping channels, but also reduces farmers' shopping costs. Rural Taobao is part of Alibaba's rural strategy and a manifestation of the Internet's transformation of rural areas. Nongcuntaobao also has an application called Cun Taobao, but the rural Cun Taobao app was disabled on June 1, 2017, and its business was transferred to the mobile Taobao app.



Source: www.ce.cn.

Farmer is broadcasting live on her mobile phone, showcasing her own fruit trees, and netizens place orders directly online.



Source: www.ce.cn.

In 2017, in the southeast coast of Putian, Fujian, China, a drone group sent six boxes of passion fruit to Taobao in the rural area of Meizhou Island.



Source China: Net "Agricultural Observation"

In Zhongjiang County, Sichuan Province, China, almost no one is seen in the 3,500 acres of wheat fields. But over the wheat field, a pesticide spraying team composed of 10 plant protection drones is busy all the time to prevent and control wheat stripe rust, powdery mildew, and aphids. In less than 6 hours, 3500 mu of wheat completed the pesticide spraying task.



Source: Economic Daily China, photo courtesy of the interviewee

Qing Zhaochen (front left), member of the Standing Committee of the Mentougou District Committee and Deputy District Mayor of Beijing, was introducing the characteristics of Mentougou cherries to consumers during the live broadcast. In 2019, in response to the "difficult selling" and other difficulties caused by the epidemic, local party and government cadres stood in front of the camera and brought goods for local endorsements, helping farmers to sell agricultural fruits and vegetables and local specialties online.



Source: China Youth Daily

On April 15, 2019, 90 county chiefs across the country conducted a live relay on Taobao for 14 hours. Twenty days ago, Tang Xiang and 3 other deputy county chiefs conducted official live broadcasts on four or five platforms and sold 1,871,700 agricultural products. In 2019, in response to the "difficult selling" and other difficulties caused by the epidemic, local party and government cadres stood in front of the camera and brought goods for local endorsements, helping farmers to sell agricultural fruits and vegetables and local specialties online.



• Introduction of the agriculture in Zhejiang province

Zhejiang is a comprehensive agricultural area with comprehensive development of agriculture, forestry, animal husbandry and fishery in China and it has a diversified climate environment and diverse biological species. The industries of grain, oil, livestock, fishery, vegetables, tea, fruits, edible fungi, flowers, etc. have developed steadily. Special industries such as tea, sericulture, bees, and edible fungi are developing nationwide and occupying a larger share. In 2020, the sown area of grain was 14.901 million mu, the yield was 406.48 kg/mu. In 2020, the province's agricultural and sideline products export value was 9.85 billion U.S. dollars, ranking top in the country.

The degree of agricultural industrialization is high and the operating mechanism is flexible. As of 2020, more than 110,000 family farms and 42,000 specialized farmer cooperatives have been cultivated, and more than 5 million farmers have been promoted. The production and operation capabilities of new agricultural business entities have been continuously improved. A total of 100 modern agricultural industrial parks, 100 characteristic agricultural towns, and 100 provincial-level modern agricultural parks with in-depth integration of primary, secondary and tertiary industries have been built.

Rural residents have high incomes and strong collective economic strength. The per capita disposable income of rural residents was 31,930 RMB, an increase of 6.3% over the previous year. It ranked first in all provinces and regions in the country for 36 consecutive years. The ratio of urban and rural residents' income decreased to 1.96:1, and farmers' consumption expenditure was 21,555. RMB. At the same time, the rural areas will build a well-off society at a high level in an all-round way.



Zhejiang Province

• **Agricultural researches in Lishui**

Before the founding of New China, the economy in Lishui belongs to traditional agricultural economy with very backward production methods, and modern industry was almost blank. After the founding of New China, the economy in Lishui developed rapidly, the economic development mode continued to change, and the industrial structure was gradually optimized. In 1949, the city's total industrial and agricultural output value accounted for 94.0% of the total agricultural output value. The total agricultural output value increased from 130 million rmb in 1949 to 16.178 billion rmb in 2020, an average annual increase of 7.0%. By the end of 2020, a total of 547 grain production functional zones have been built, with a total area of 449,800 mu. The city has formed nine characteristic industries such as fungus, tea, fruits, vegetables, medicine, animal husbandry, camellia, bamboo shoots and fishery. The output value in 2020 is 13.181 billion rmb, accounting for 81.5% of the total output value of agriculture, forestry, animal husbandry and fishery. The city continues to increase investment in agriculture, modern agricultural business entities increase, agricultural leading industries continue to develop, and the integration of agriculture and tourism continues to increase.

In 2018, the GDP of Lishui City was 139.5 billion RMB, which is the second lowest in the province and only higher than Zhoushan; the per capital GDP was 63,612 RMB, which is the lowest in the province; the low GDP of Lishui reflects the reality of long-term development, and it is also At present, the resource endowment has not yet fully exerted its advantages. How to efficiently transform GEP (Gross Ecosystem Product) into GDP is an important challenge facing Lishui in the future.

02.2/ Agriculture In Lishui, Zhejiang Province

• Agricultural researches in Lishui

Along with Songyang Valley, Lishui is the only agricultural mountain plain in the mountains of southern Zhejiang. The area of permanent basic farmland with Bihu Plain as the core exceeds 27.6 square kilometers. It has excellent resources and important significance in agriculture and ecology. And it has the nearest contiguous development space to the main urban area.



1. Diversity of nature Source: photograph provided by Zhang Feng.

2. Partial bird view of Lishui Plain Source: 2020 Dwellings in Lishui Mountains Master Plan 2020

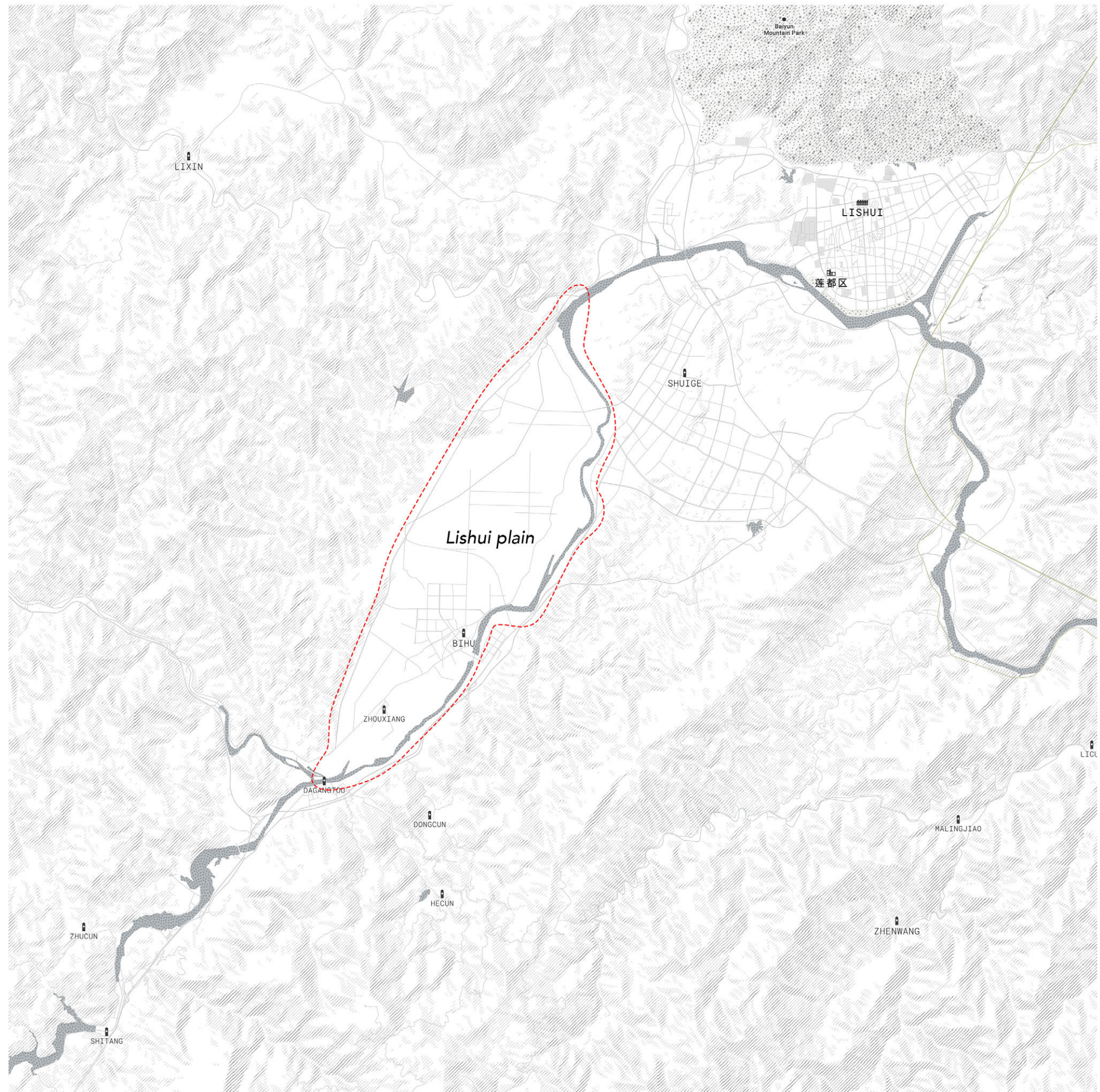
02.2/ Agriculture In Lishui, Zhejiang Province

• Agricultural researches in Lishui

Agriculture status quo of Lishui Plain

Due to its location in the mountainous area, Lishui City's agricultural production is still dominated by smallholders. This self-sufficient smallholder economy has a scattered production body and a low degree of organization. It is difficult to supply high-quality agricultural products on a large scale, and agricultural products are transformed into The com-modity rate is low, and economies of scale cannot be realized. At the same time, the "low, small and scattered" product supply model has led to weak resistance to market risks, the quality and safety of agricultural products cannot be guaranteed, and the advantages of high-quality goods are difficult to reflect. In recent years, affected by high food production costs, low output, low prices, etc., there is a lack of unified agricultural in-formation construction, market information is asymmetry, and it is difficult to adapt to the risks of the big market. Farmers have little income from the land, and their enthusiasm for growing grain is not high. In recent years, the sown area and output of grain in our city have shown a downward trend year by year. In addition, most of the young and strong laborers go out to work, and the phenomenon of aging left-behind labor is serious. The shortage of cultivated land in mountainous areas has been ag-gravated. According to incomplete statistics, at the end of 2016, the area of abandoned arable land in the city exceeded 200,000 mu, accounting for more than 13% of the total arable land area. On the other hand, the ultra-small scale operation of farmers has also become an obstacle to the scale operation of agricul-ture, and the problem of "short, small, scattered" land circula-tion restricts the development of scale operation.

Source: Notice of the People's Government of Lishui City on Issuing the Fourteenth Five-Year Plan for National Economic and Social Development of Lishui City and the Outline of Long-Term Goals for 2035



02.2/ Agriculture In Lishui, Zhejiang Province



• Agricultural researches in Lishui

Expansion of Lishui Plain

With the expansion of the urban area of Lishui and the development of the countryside, the Lishui Valley has been invaded to varying degrees at different boundaries and locations. Land development is also destroying plains that were originally rich in natural and agricultural resources. The process of urbanization is inevitable, but how should the countryside face the impact of urbanization? How should the destiny of agriculture, which has been closely linked to the countryside for generations, be handled? What will happen to the relationship between agriculture and farmers? What is the impact of new agriculture on the lives of farmers and its response to the environment?



02.2/ Agriculture In Lishui, Zhejiang Province

• Agricultural researches in Lishui

Agriculture challenge of Lishui Plain

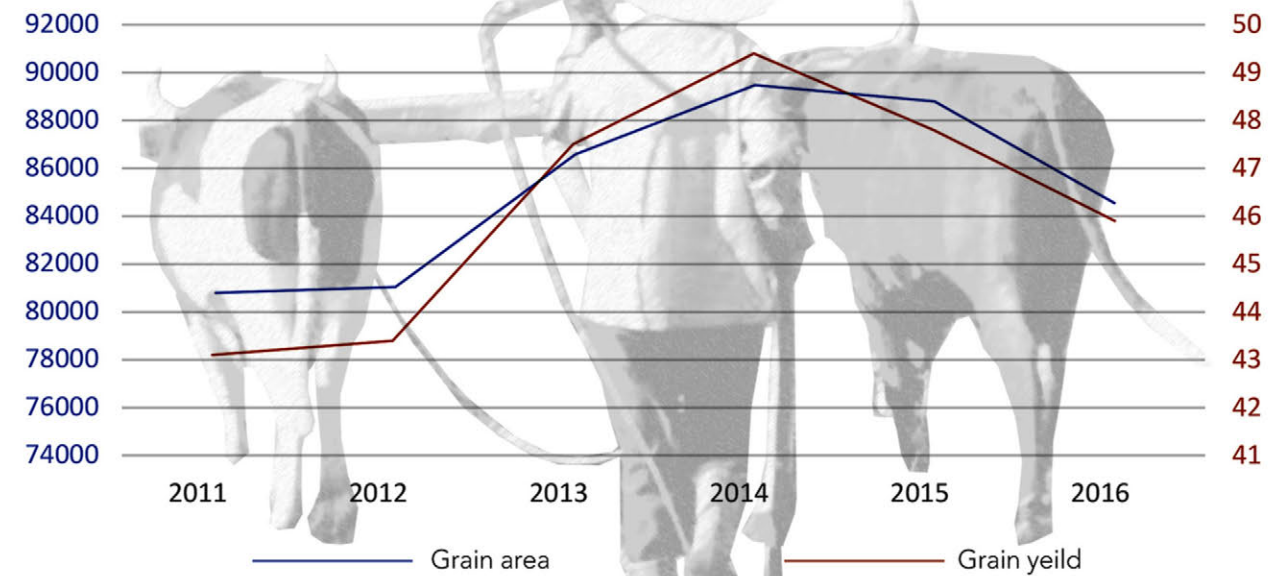


In recent years, affected by the high cost of grain production, low technology conversion rate, low output, low price, etc., farmers have obtained less income from the land, and their enthusiasm for growing grain is not high. This has led to the sown area and yield of grain in Lishui Decrease year by year.

According to statistics, there are currently 5,498 specialized agricultural cooperatives in Lishui City, but half of them are shell enterprises or are in a state of suspension. In 2016, there were only 56 agricultural processing enterprises above designated size (including agricultural and sideline food processing, food manufacturing, and refined tea industry) in the city, with an annual operating income of 5.12 billion yuan. According to market data of more than 100 million yuan provided by the market supervision department, there were only 5 large-scale agricultural and sideline products professional trading markets in Lishui City with an annual transaction volume of more than 100 million yuan in 2016, and the annual transaction volume was less than 10 billion yuan.

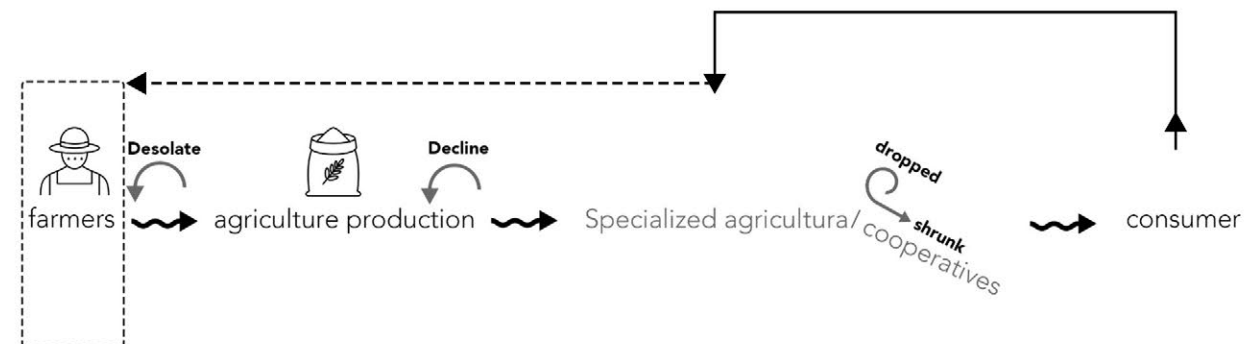
Source: Report of People's Government of Lishui City on Agriculture of Bihu area, photoed by Zhang Feng.

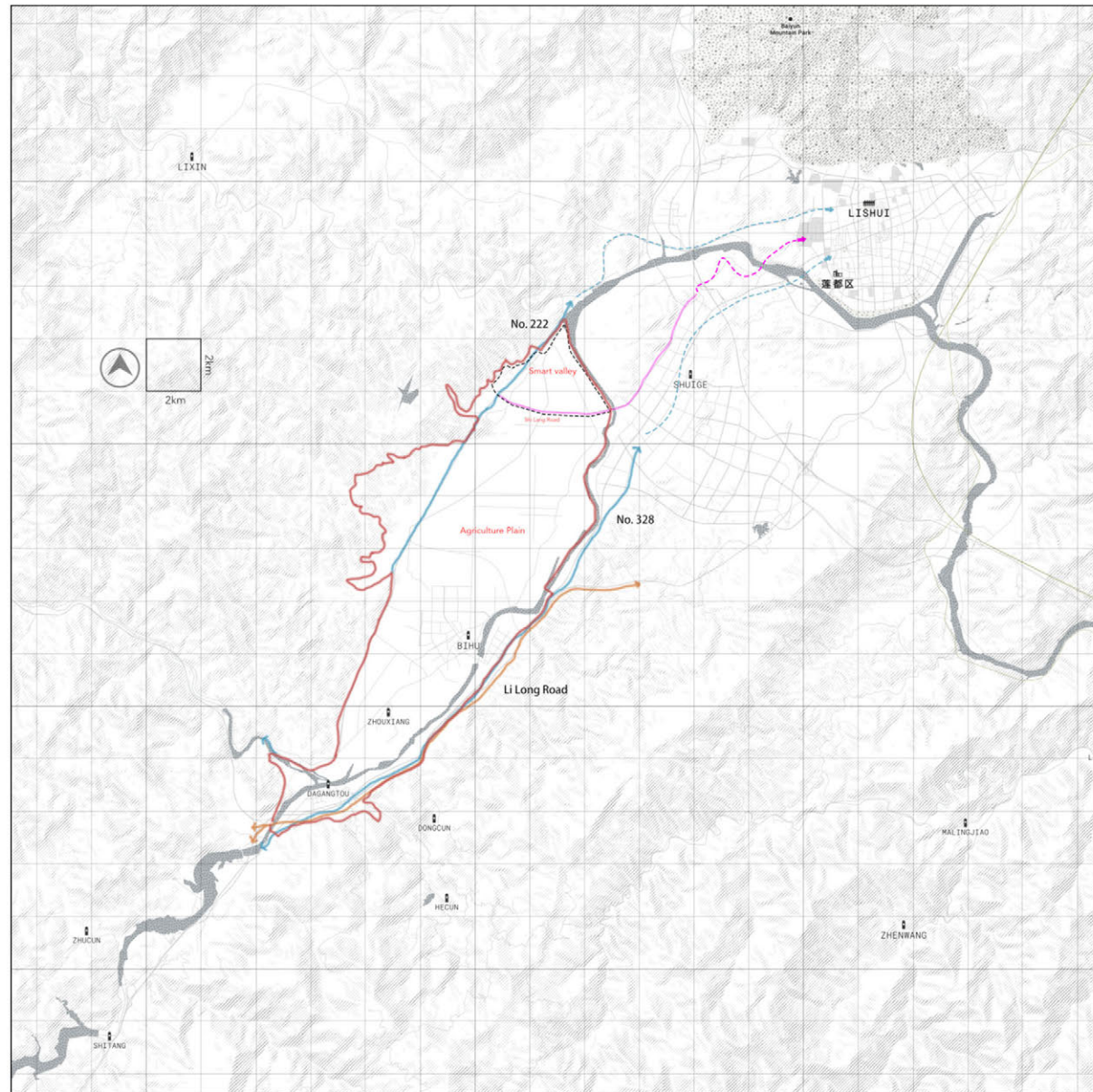
Grain area/Grain yeild



Source: drawing by author, data from the Report of People's Government of Lishui City on Agriculture of Bihu area

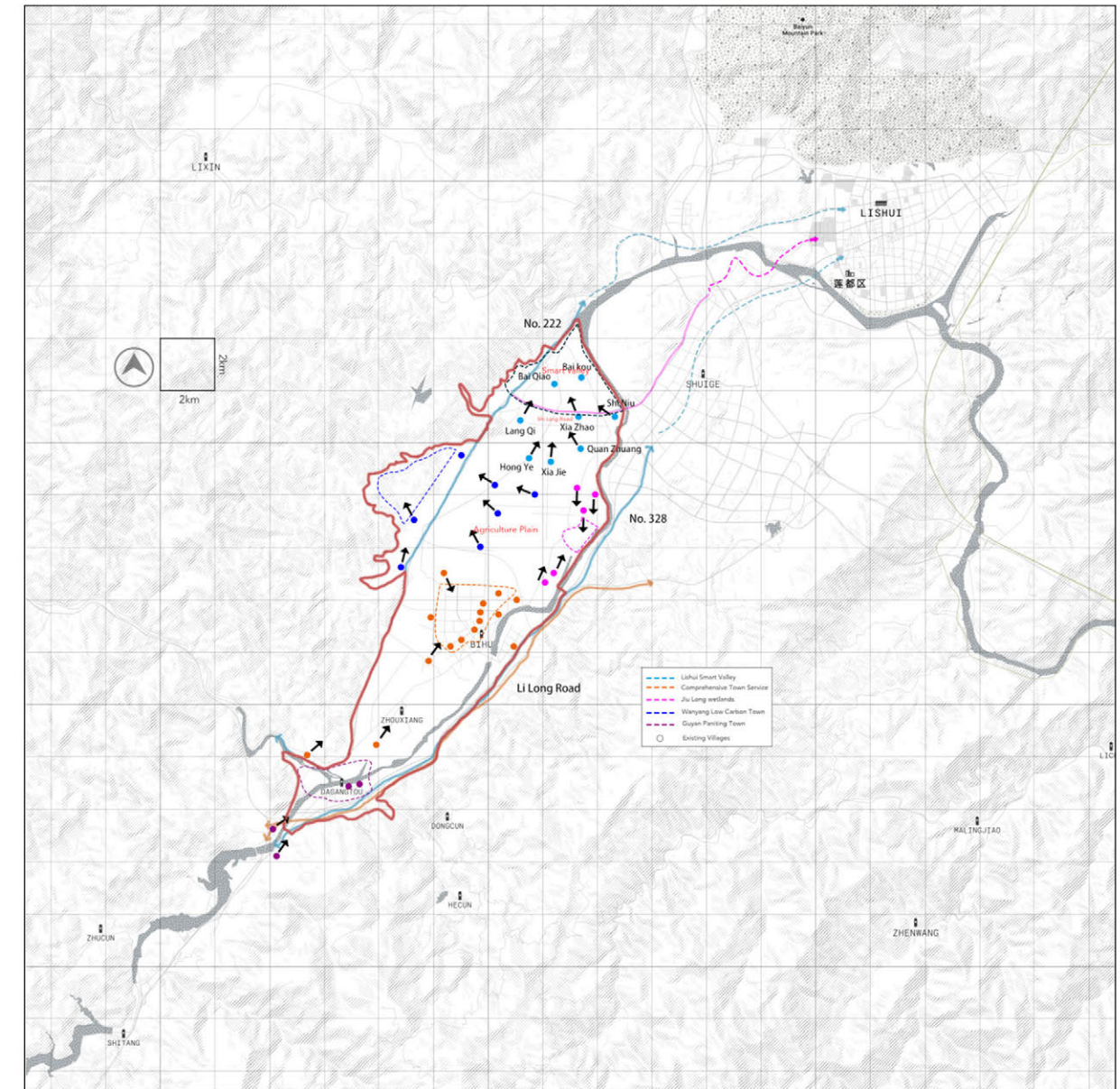
Existing supply chain





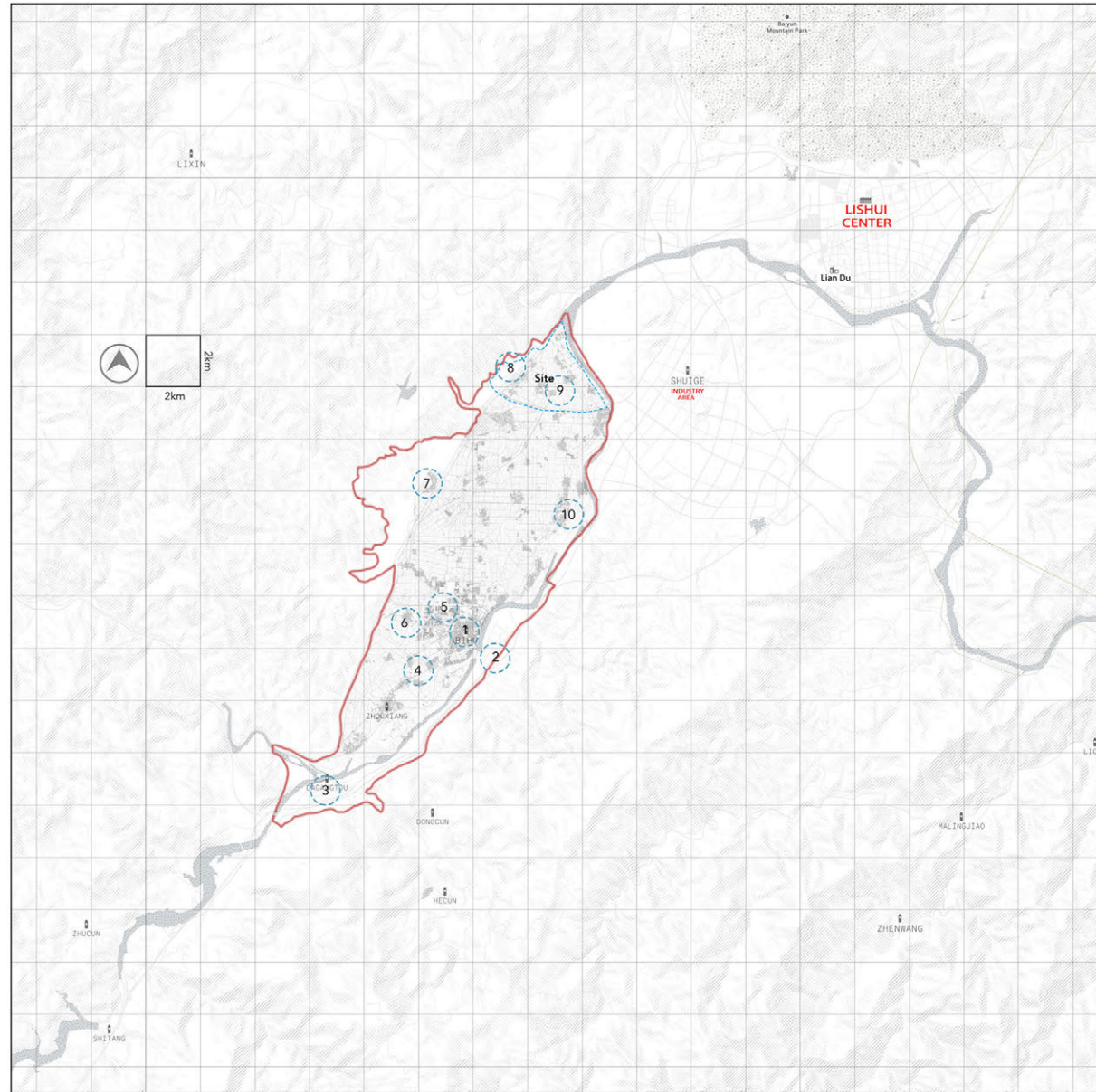
Global traffic analysis

No.222 Provincial Highway through Lishui Plain from the west side, meanwhile No. 328 Provincial Highway through Lishui plain in the east side. Both of them are heading to the heart of Lishui city. In addition, one more important main road, which is Shi Lang Road, playing a significant role in connecting the internal plain, the ShuiGe industry area and LISHUI center.



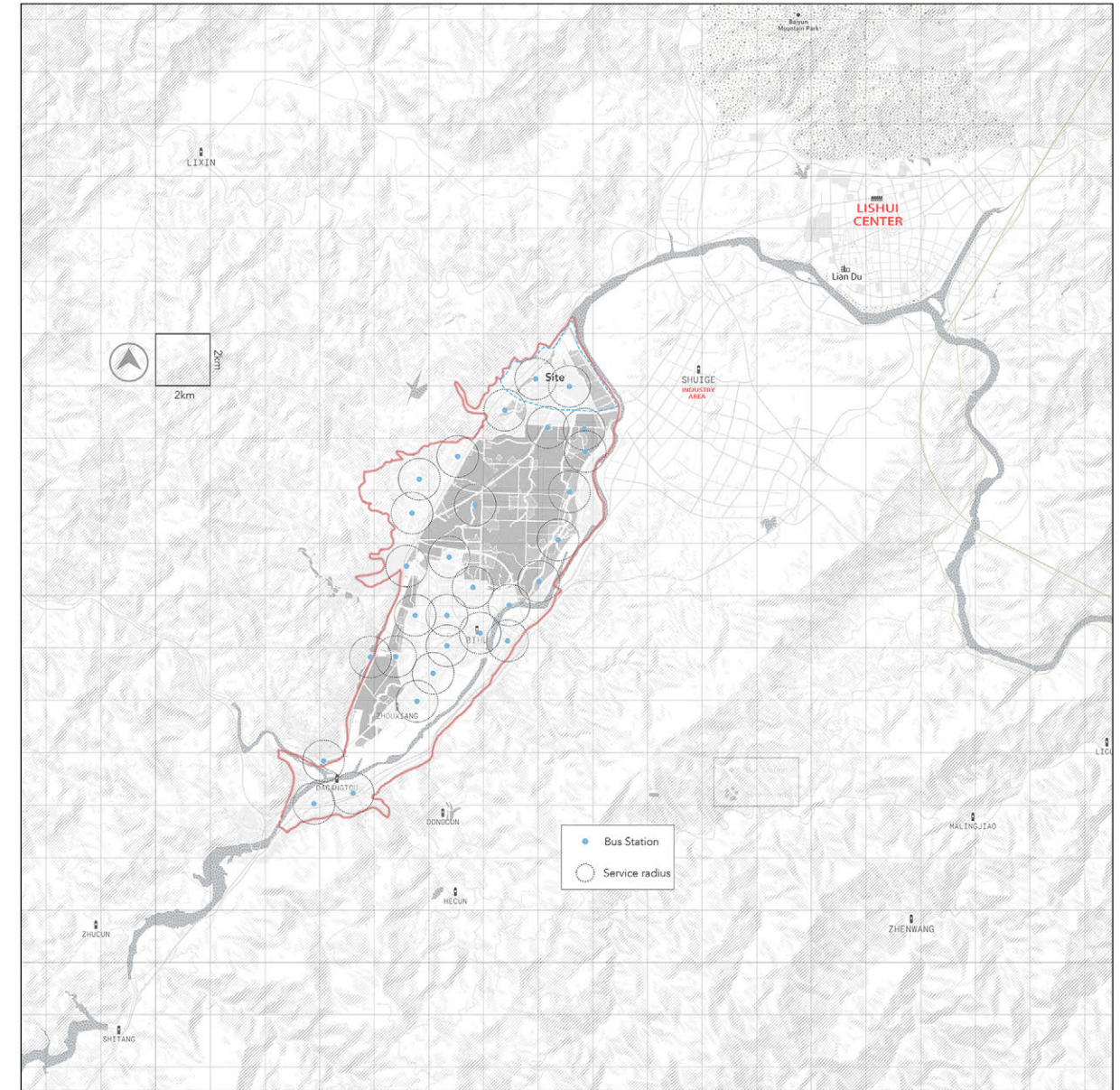
Villages analysis

The 2012 Bihu New Town strategic planning research document in Lishui City shows that it intends to adopt apartment-style agglomeration based on the land requirements of the merged villages and the distance to the planned agglomeration point to realize the merger of the villages within the planned scope. The eight villages of Quanzhuang, Hongye, Xiajie, Shiniu, Baikou, Baiqiao, Langqi, and Xia Zhao will gather in Lishui smart valley.



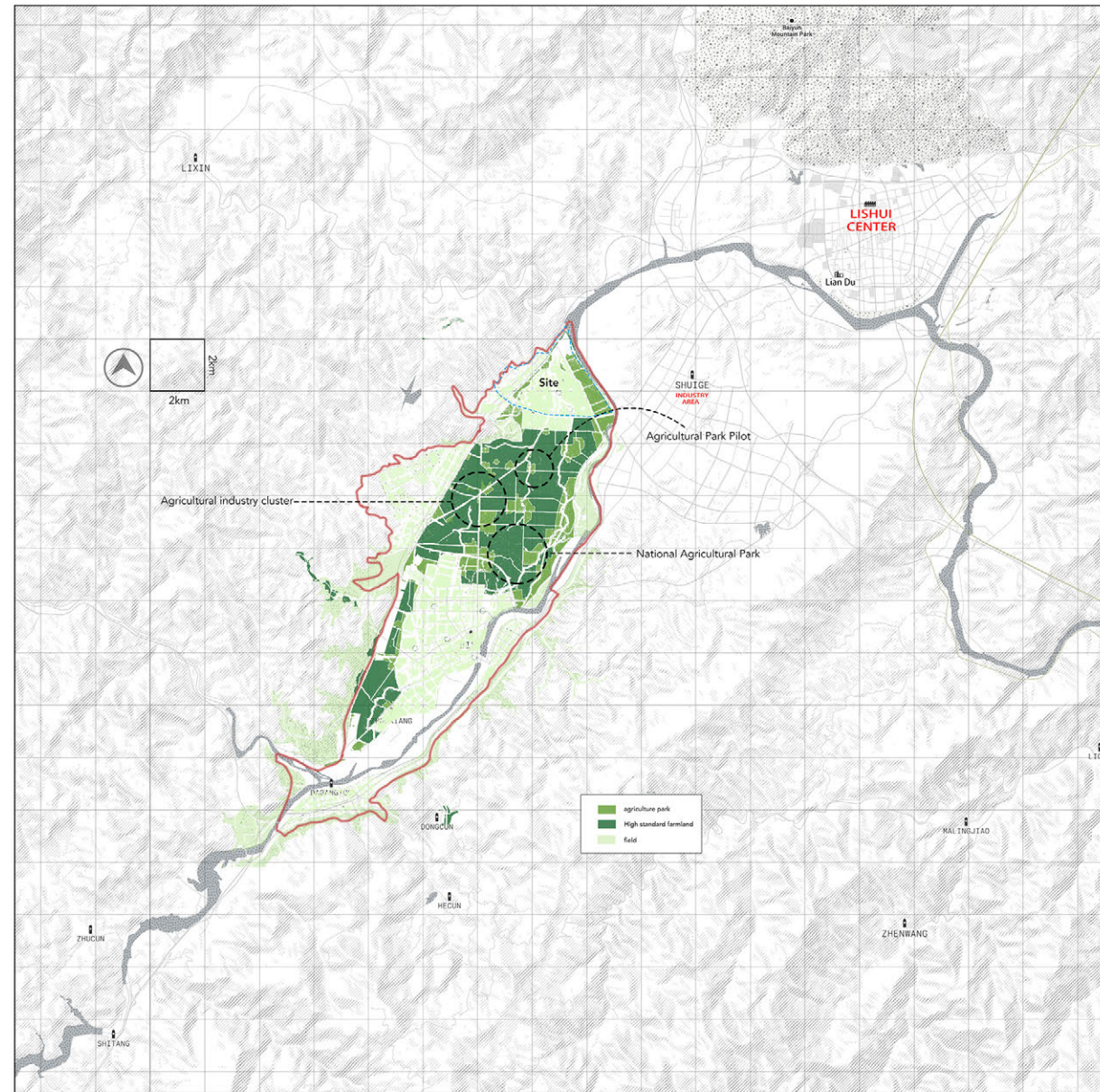
Residential Land Analysis

In order to meet the residential needs of the population in the region, the plan is to set up a total of 10 plates with relatively concentrated residential functions, which are distributed in the main functional areas and residential land. The total area is 9,872,200 square meters (including business Residential land).



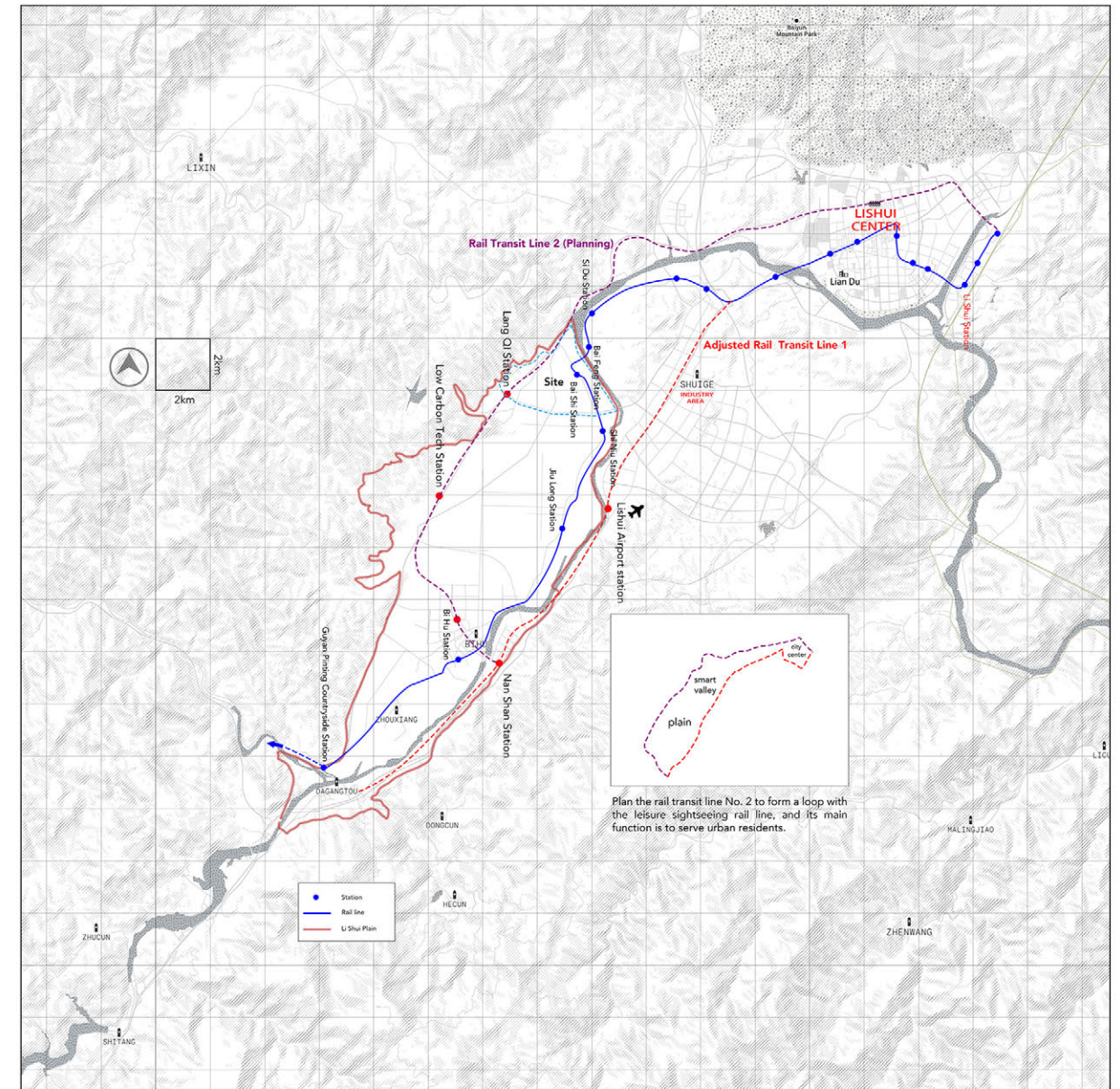
New ground transportation

In order to ensure that residents of the entire new district can easily access public transportation services, the document shows that it is estimated that there will be a bus stop every 500-800 meters. The service radius of meters covers all construction land.



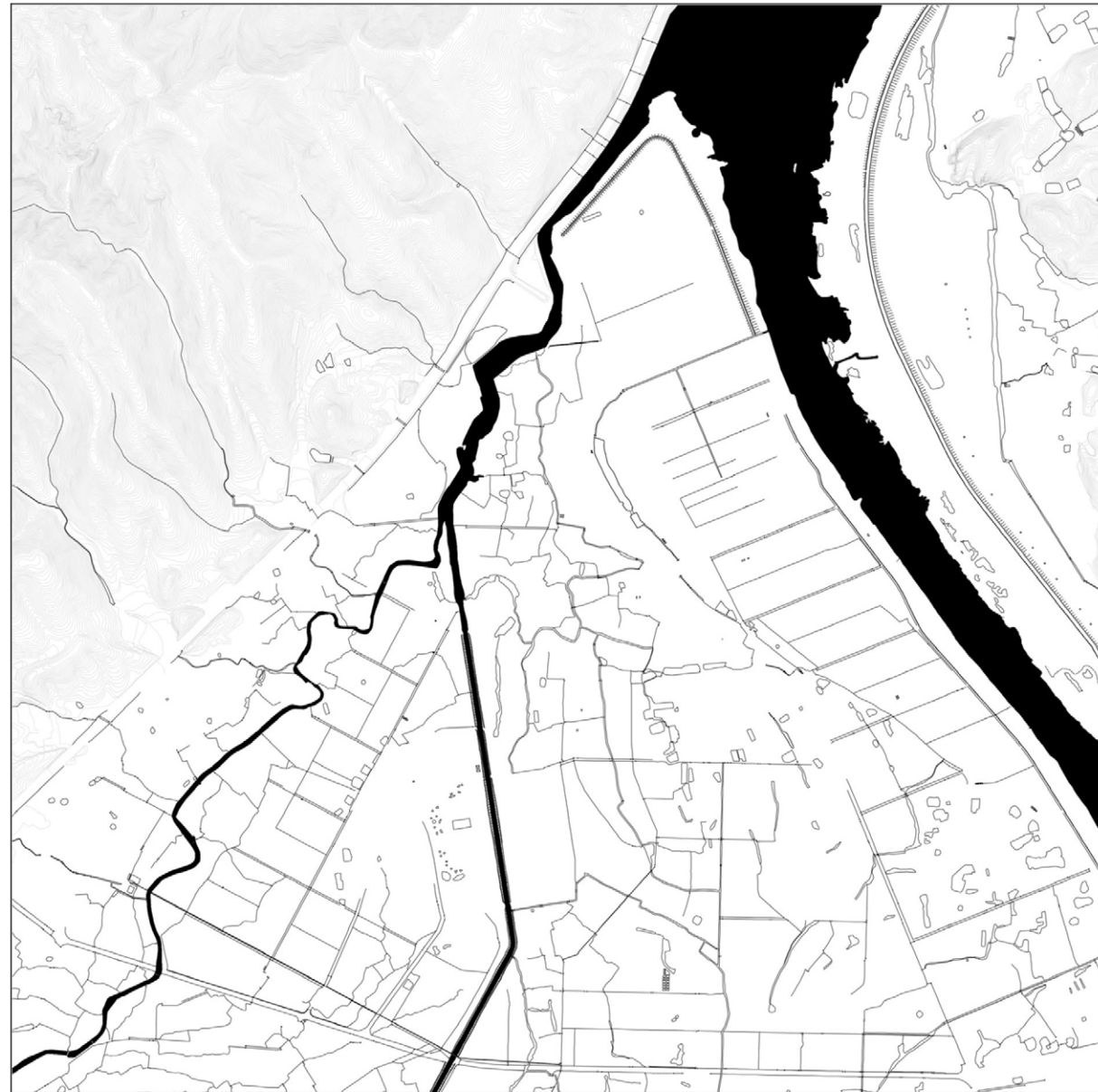
Agricultural Land Analysis

The plan combines the transformation and construction of the towns of Bihu and Dagangtuo to form a green public open space system based on the countryside and urban parks, community green spaces and green roads.



Traffic Analysis

According to the recommended plan for the leisure tourist rail transit line in Lishui City, the planned rail line is from the Shuidongbei Station in the east, passing through Lishui High-speed Railway Station, Huayuan Road Commercial District, Water World Scenic Area, Shiniu Hot Spring, and Jiulong Wetland (contact the airport by shuttle bus), Guyan Painting Township and other nodes, the line is about 36.5 kilometers in length, the whole line is elevated, there are a total of 18 stations, and its function is mainly to serve tourists.



Water System Analysis

Lishui Smart Valley is adjacent to the Ou River, and the Minzhi River and the tributaries of the Oujiang River run through the Lishui Smart Valley, providing protection for traditional agricultural irrigation in the triangle area.



Rural Environment Analysis

The rural settlements of Lishui Smart Valley is surrounded by irregular small-scale agriculture and natural environments.



Built Environment and Main Infrastructure

Lishui Zhigu is on the side of two major urban highways leading to the main urban area. The village and the village are connected by secondary roads, and there are many disconnections in the area.



Villages

Most of the villages maintain the traditional village texture, and some large-scale residential buildings have been added. This part can be seen as the result of urbanization.

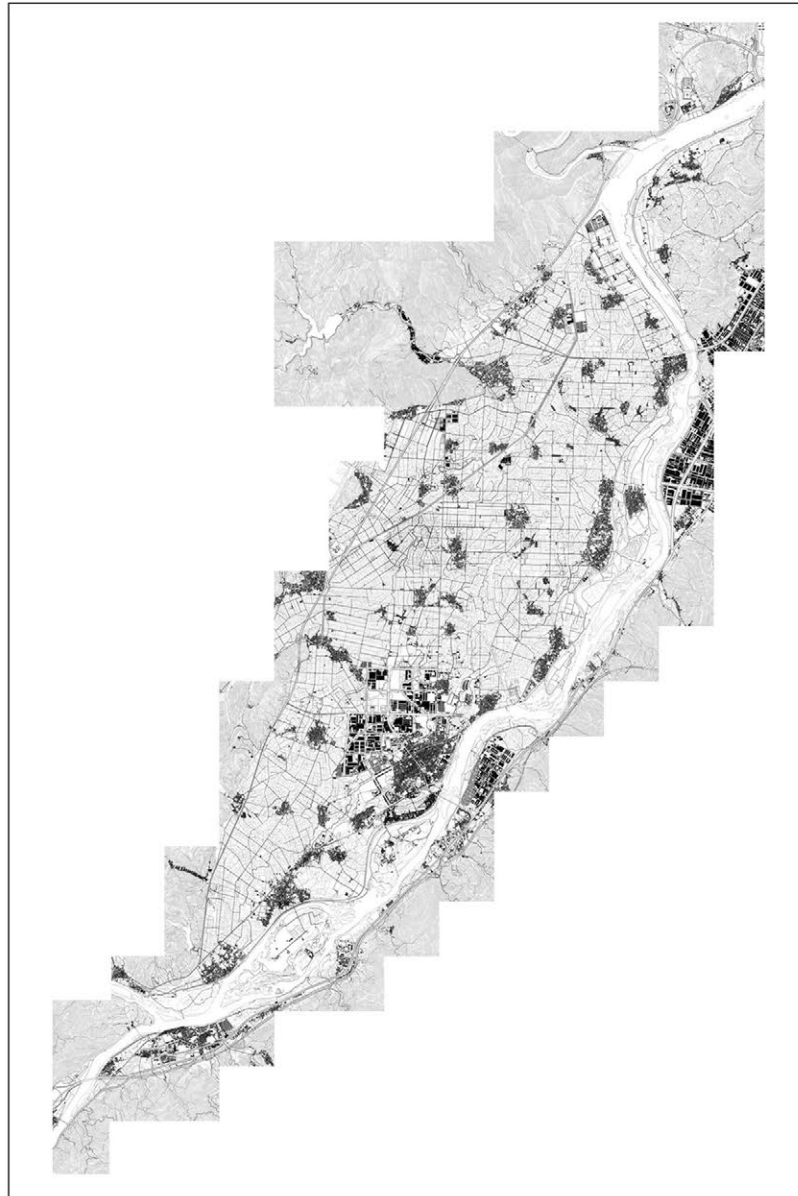
03.0/ FARMING IN AN ONLINE WORLD

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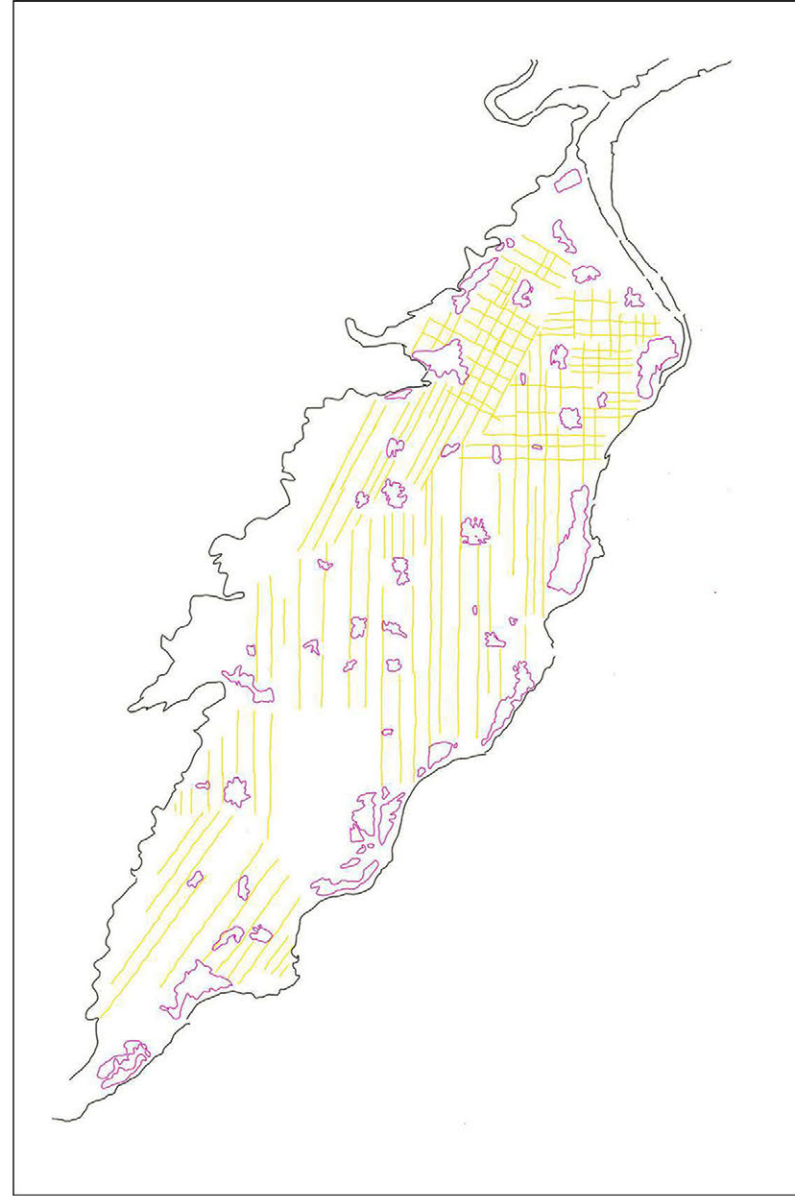


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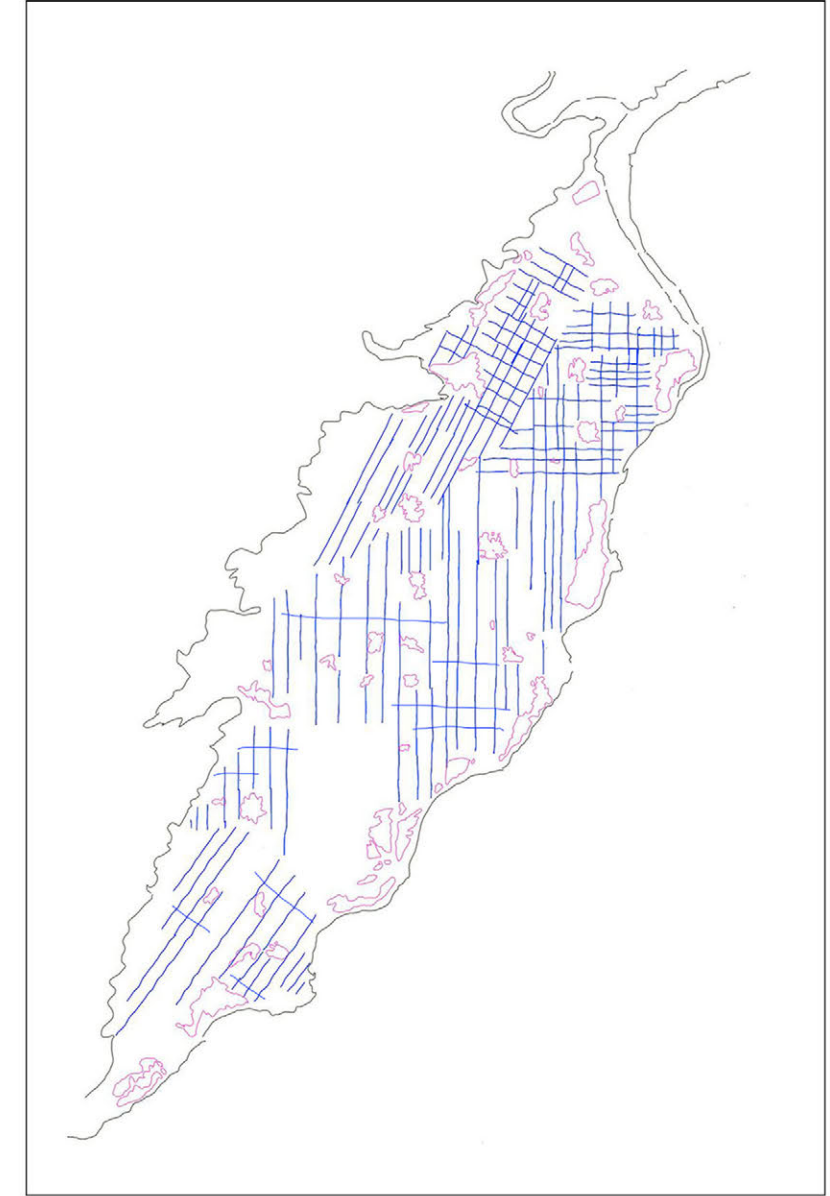
Existing Lishui plain



1.Re-manage farmland(Large-scale farmland)



1-1 Re-plan water system

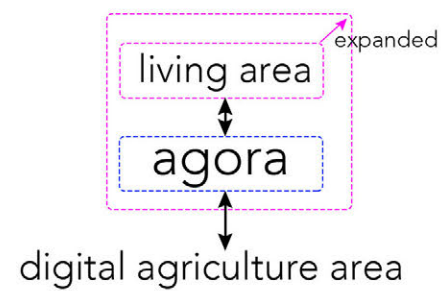


In the context of quasi-urbanization, the different issues raised for agriculture are the products of new mobility, new quality, temporality, functionality and regionality. In fact, this includes the new mobility of residents and agricultural production networks. The originally small and scattered agricultural land cannot cope with this new production network. New adaptive agricultural networks are imperative, both spatially and horizontally.

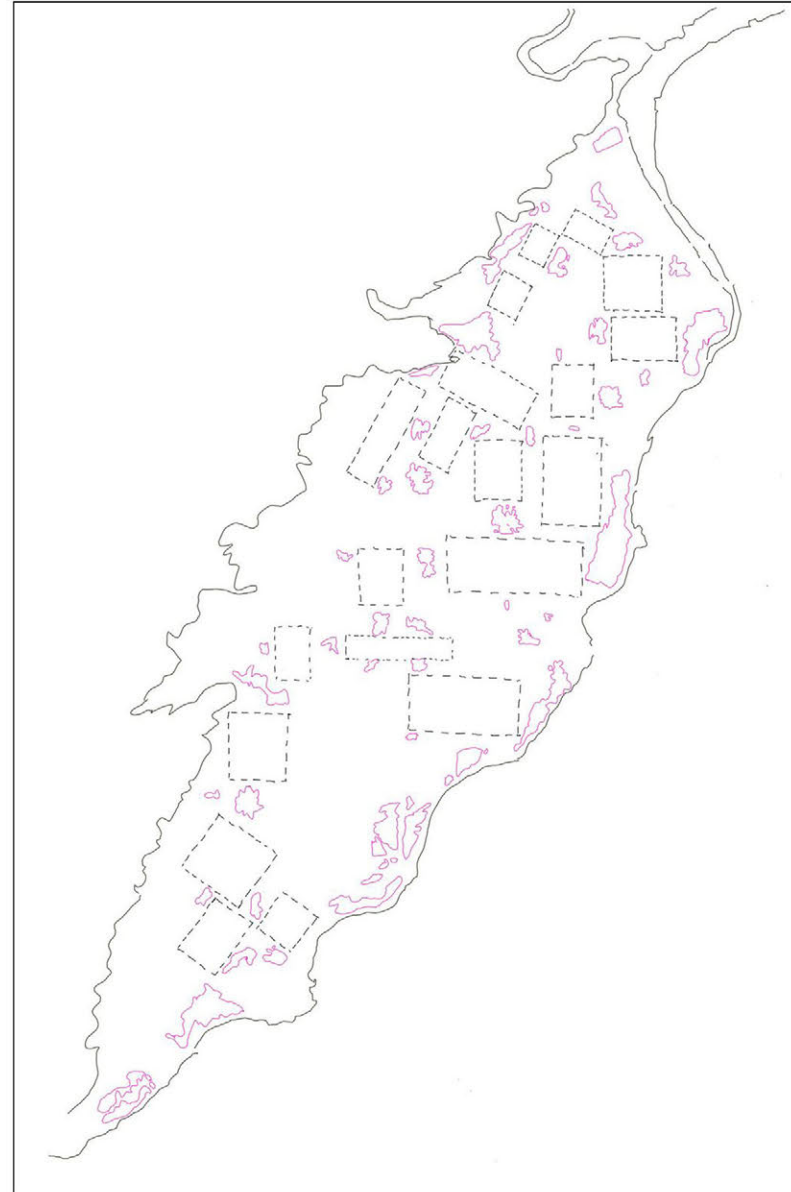
In addition to preserving the original villages to deal with the new expansion of future township, agricultural land is re-scaled, and small and scattered unstable agricultural production becomes large-scale stable agricultural production, ensuring high-quality agricultural production yield. This part of agriculture will be completely modernized, and new technologies will replace traditional farming methods.

Restore the original river course and maintain the agricultural natural water source. In line with the new farmland network, a new inner canal is formed to serve agricultural irrigation, while part of the river also takes into account the function of freight transportation, and a new river landscape is formed on the periphery of the village.

WHAT IS RELATIONSHIP BETWEEN AGRICULTURE AND LIVING VILLAGES?

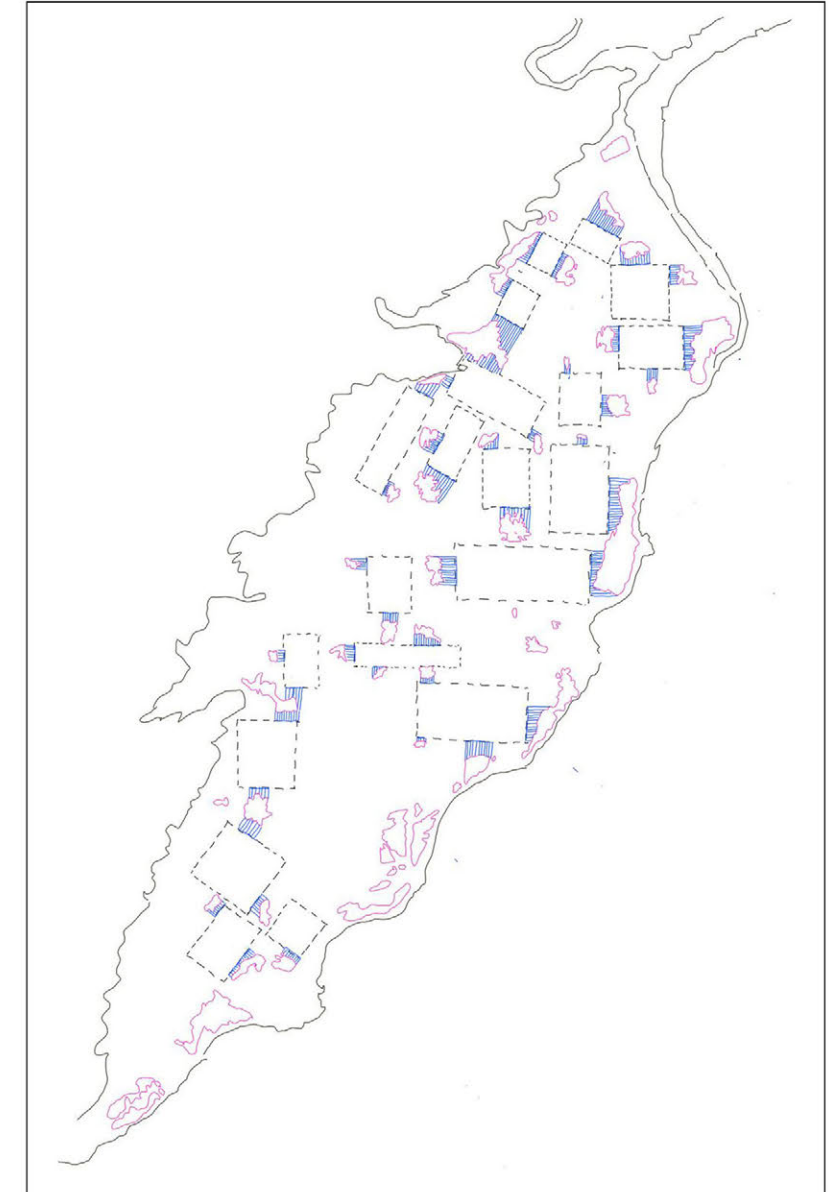


2. Select new experimental digital farmland



Centralized and effective management of agriculture reduces the waste rate of farmland. The digitalization of planting operations has promoted the steady improvement of agricultural output and quality. Through large-scale agriculture, the spatial relationship between villages and production is reconstructed.

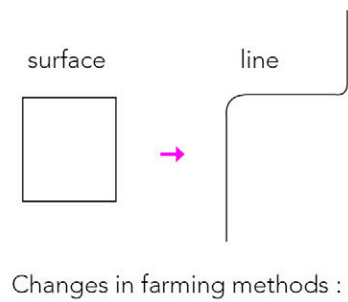
2-1 Agora (new expansion part of villages)



Agora is the product of the dynamic expansion of the village after the new agricultural product grid. It is a market for new farmers to learn and manage and create economic opportunities for locals. While continuing the original leisure lifestyle of farmers, it carries multiple functions and provides services for the entire agricultural product sales chain. A series of agriculture-related auxiliary functions centered on the small food workshop (to transform the production surplus into food), such as: new farmers live broadcast internet celebrity incubation center, vertical farm tower. Because of the new agricultural economy, the daily activities of the traditional villages are re-started here: wedding banquets, sports, watching theaters, grocery shopping, playing cards, etc.

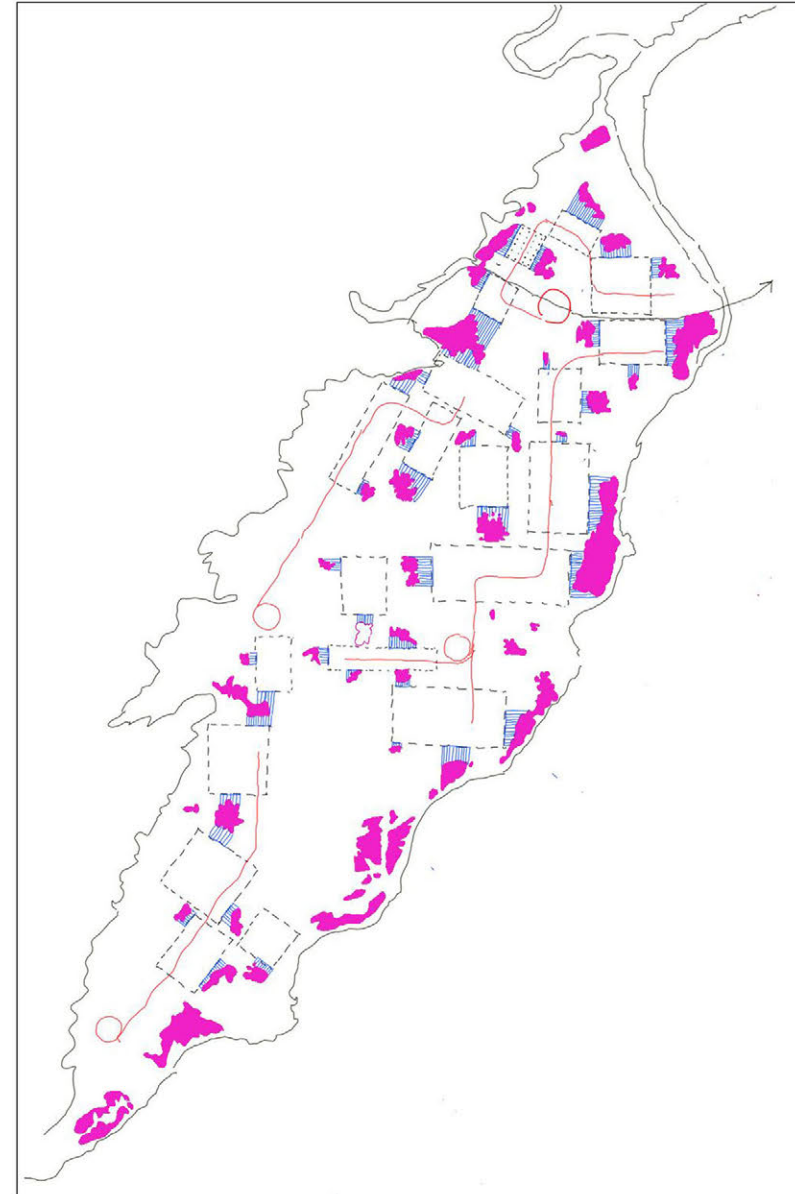
AS A MORDEN VERSION COUNTRYSIDE, WHAT MEANS PRODUCING?

23



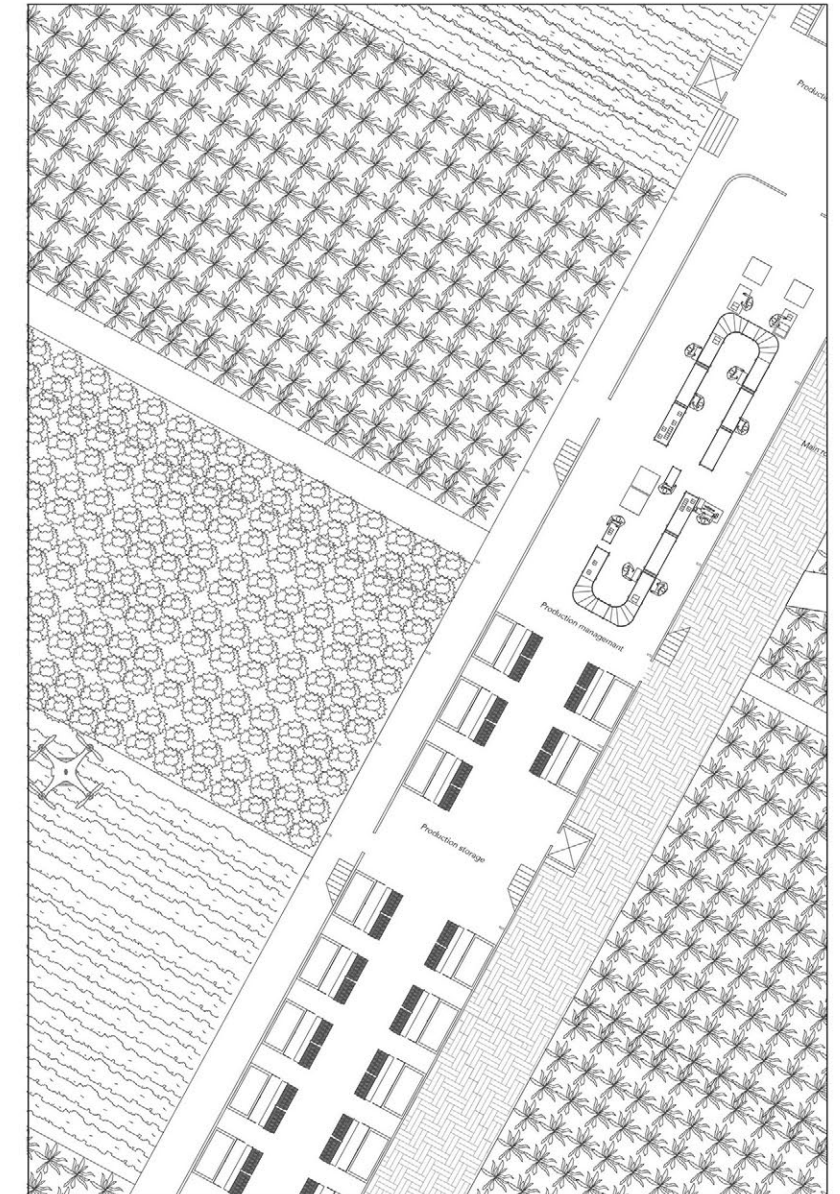
The fully modernized agriculture after large-scale scale improves the current situation of farmers' large-scale all-weather farming and realizes the linearization of agricultural production. Agricultural products will be broadcast live in the linear logistics system for distribution, security inspection, packaging, transportation and so on. Fundamentally increase agricultural income, improve the efficiency of farmers' work and the production efficiency of agricultural products.

3.new producing belt



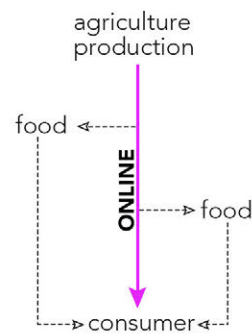
It is proposed a live broadcast logistics system for agricultural products. On the one hand, it would connects farmers to the big market through the e-commerce platform, this to increase farmers' agricultural income through online sales of agricultural products. On the other hand, different logistics systems are connected in different scales, in which some transportation spots will take the duty to delivery all production to cities.

producing linner logistics



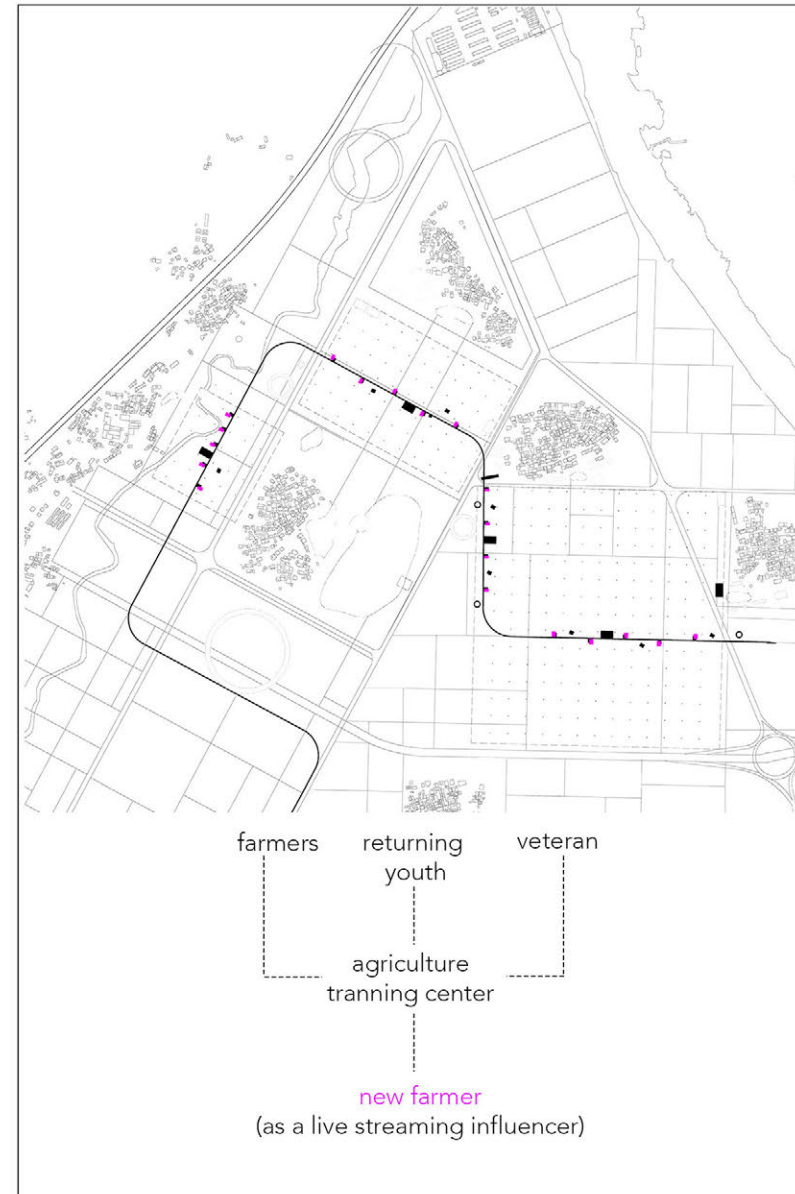
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HOW LIVE STREAMING AFFECTS PRODUCTION?



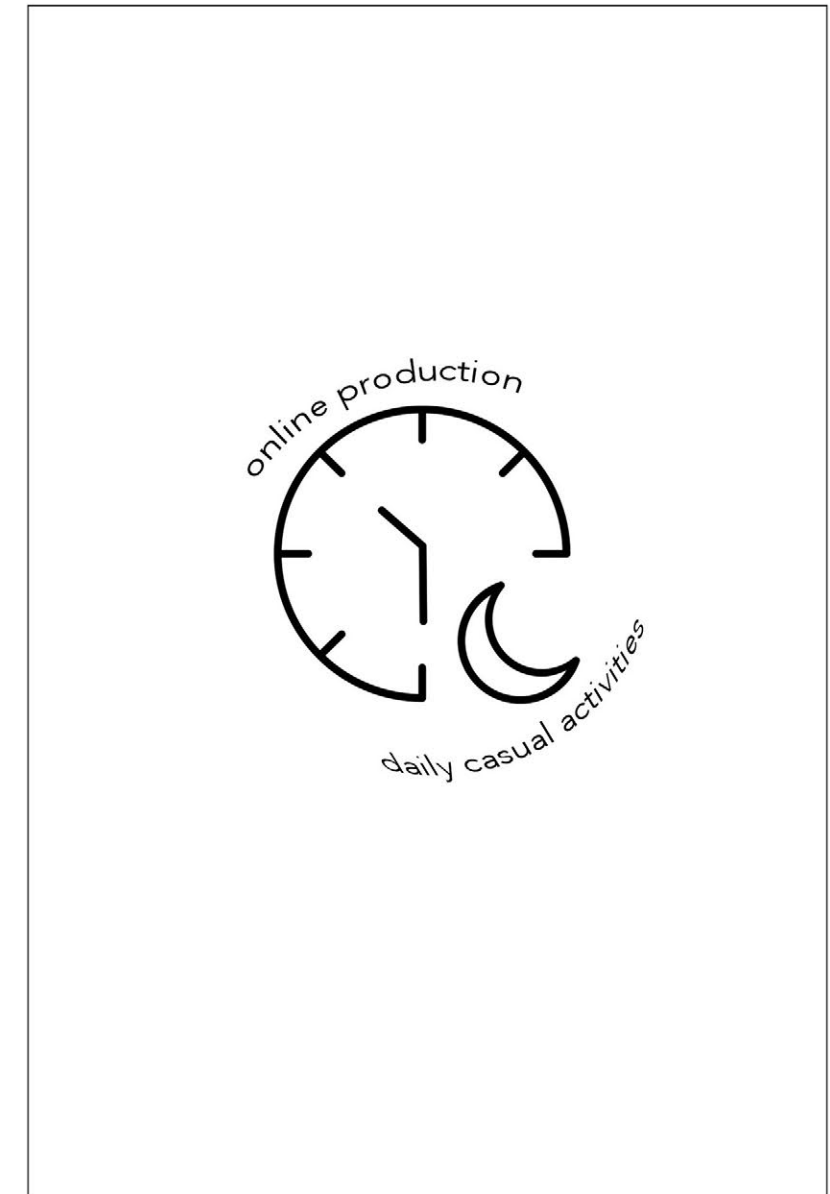
The new logistics belt plays the role of advertising, supervision and online sales. The entire production process of agricultural products (planting, product selection, and distribution) is presented by the new farmers through live webcast, and is sold directly through the agricultural production line to maximize the main income. In addition, the live broadcast experience and diversified agricultural space experience have improved the efficiency of online ordering and will evolve into a trustworthy consumer behavior. In the future, the division of labor between the new farmers will be more detailed due to live broadcast, which will give birth to a group of new farmers who understand the Internet, can live broadcast, and are good at sales.

Agriculture living streaming platform (visual agriculture)



The conveyor belt logistics system has replaced traditional agricultural farming and changed the identity of farmers. First of all, because farmers do not need to do large-scale farming manually after large-scale technology, farmers have liberated their hands to a certain extent, and farming has been fully automated. Farmers have now changed their identities as media anchors, and all automated planting and irrigation. The picking process was broadcast live and recorded in real time, and the new farmers were in front of the camera explaining the agricultural products they were proud of.

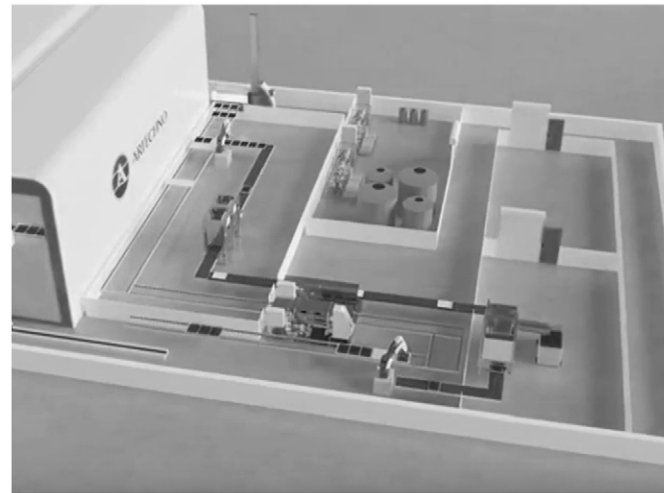
24 hours using by villagers



The linear agricultural logistics belt is used during the day-time with live agricultural products as the core, packaging, production inspection, labeling, distribution, assembly, etc. After the day's work is over, it is still open to villagers and workers off work, and a series of leisure activities are also available. This unfolds: drinking coffee, watching movies, drinking, singing, picnicking, chatting, etc.



1. Andrea Branzi
AGRONICA,
modello di urbanizzazione debole, 1995



2. Artechno
Automated Agricultural Planting Factory



3. Almere Oosterwold,
Almere, Netherlands (2011),
MVRDV



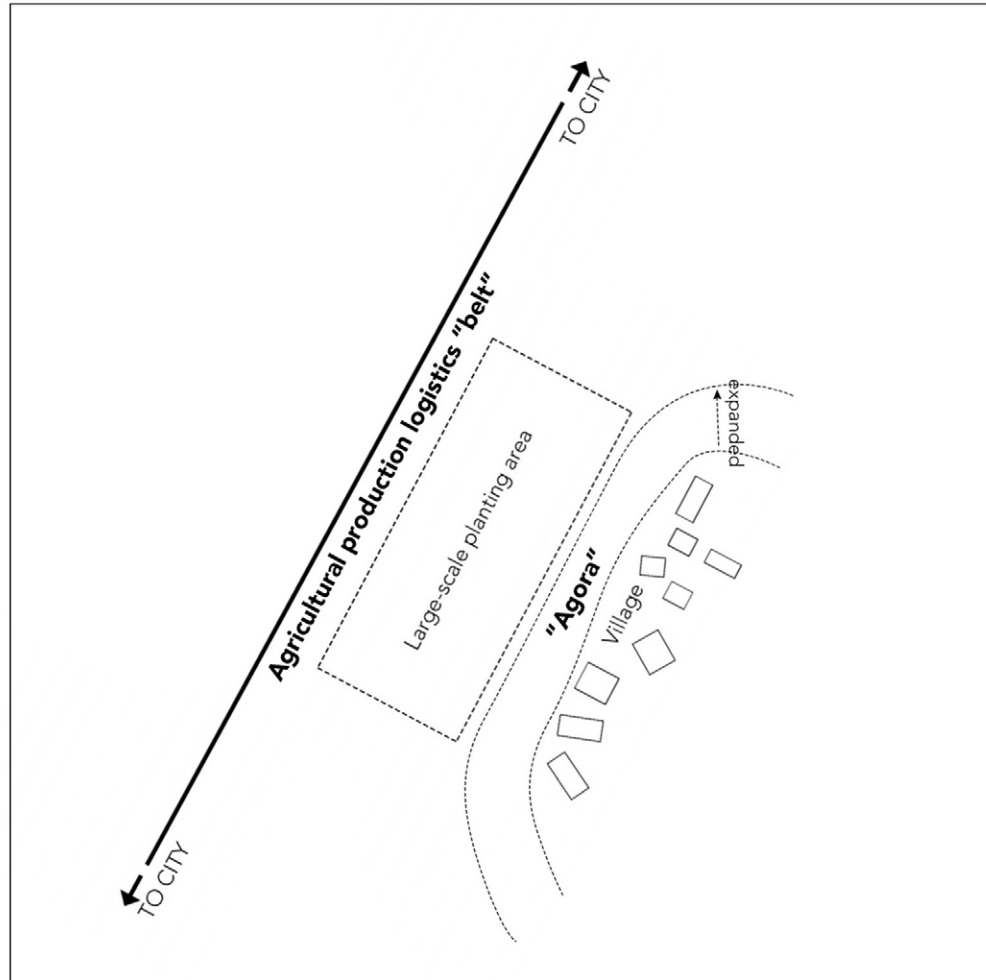
4. Umm Abirieh Farm,
Doha, Qatar (2011),
OMA



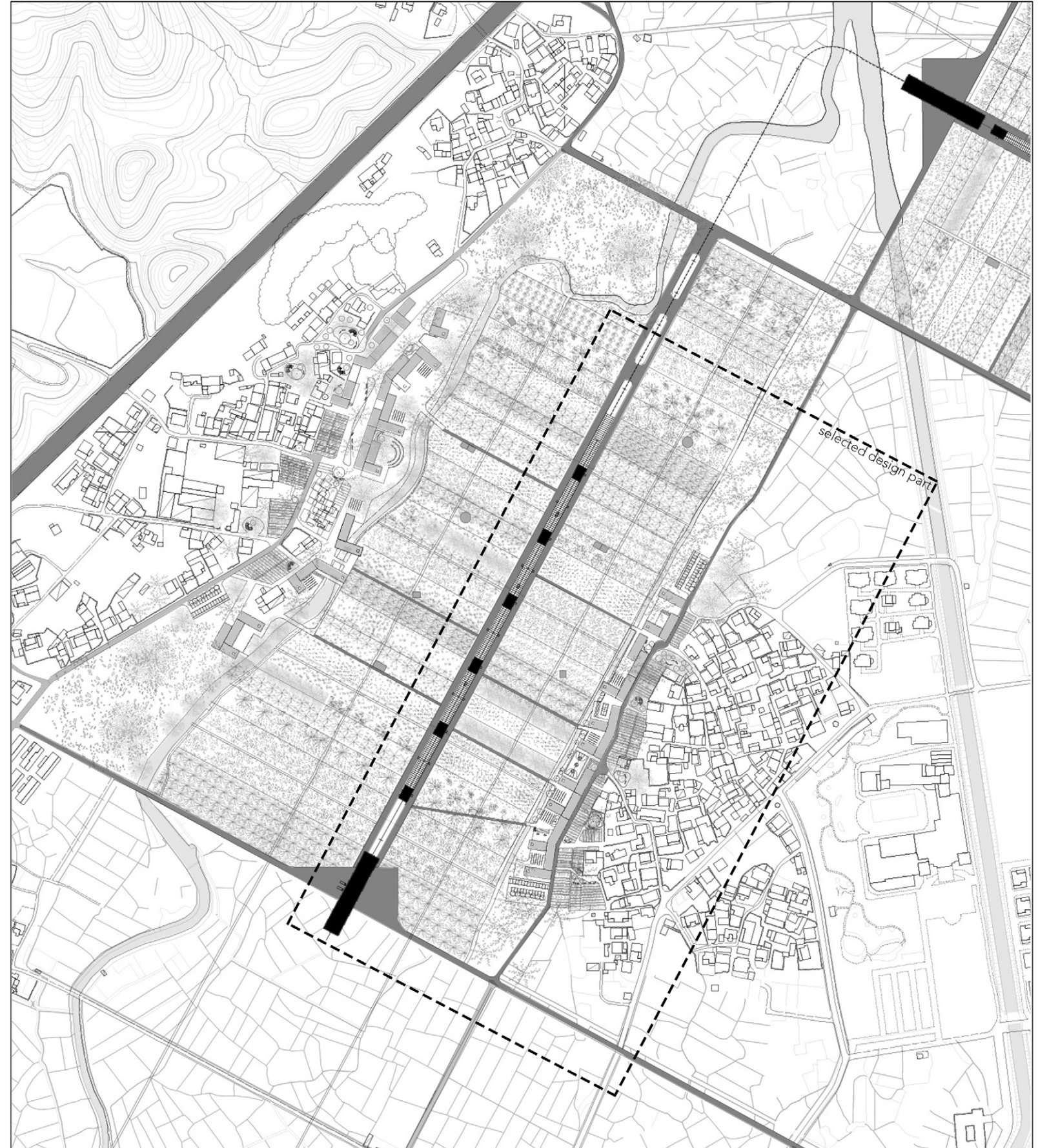
Existing of Lishui Smart Valley



General(Lishui Smart Valley) master plan

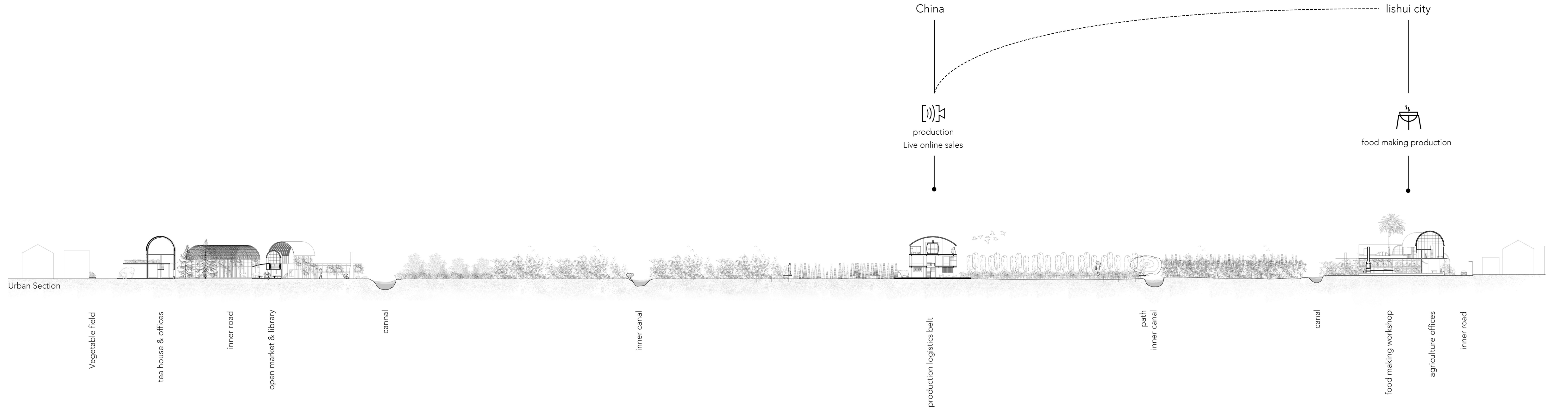


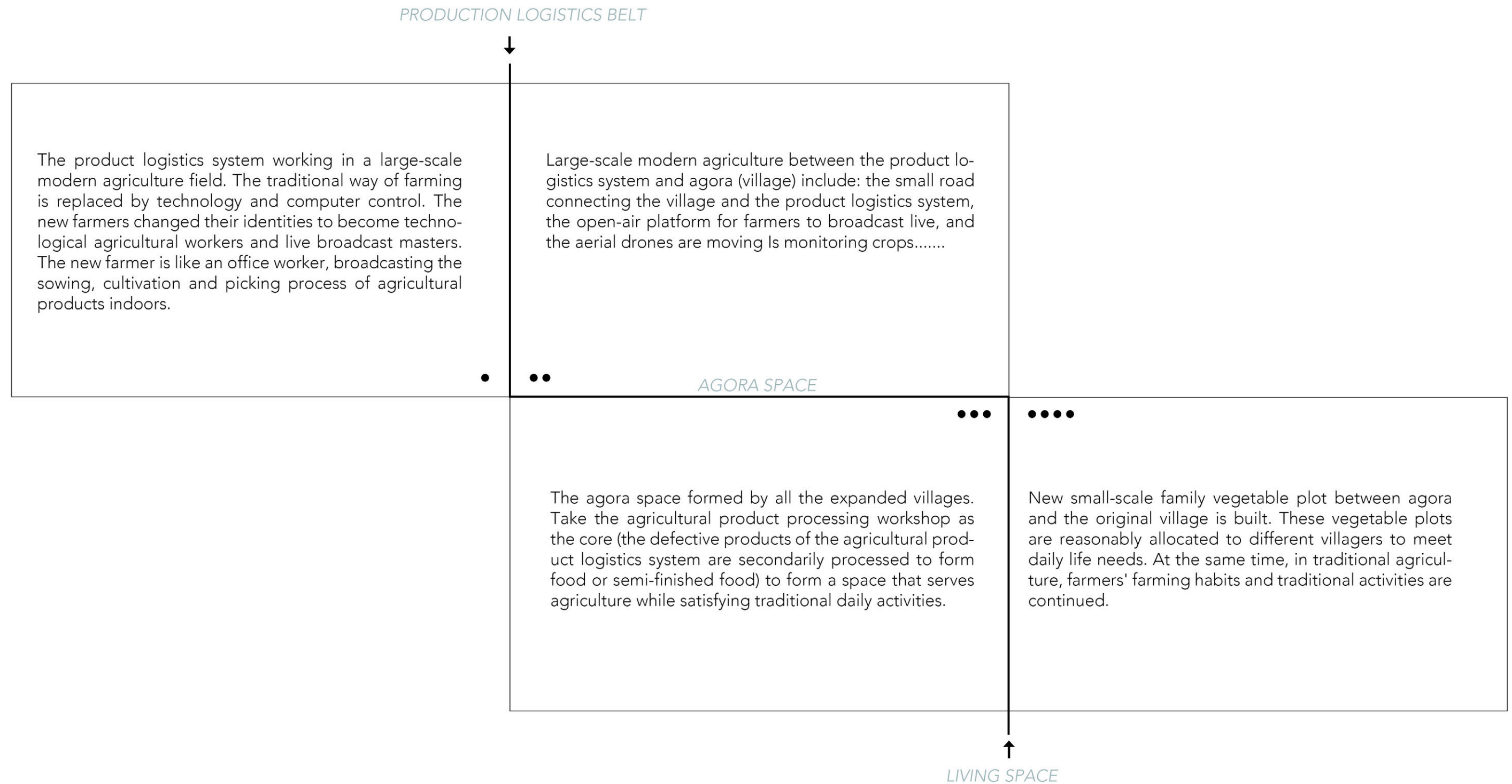
Space diagram of proposal

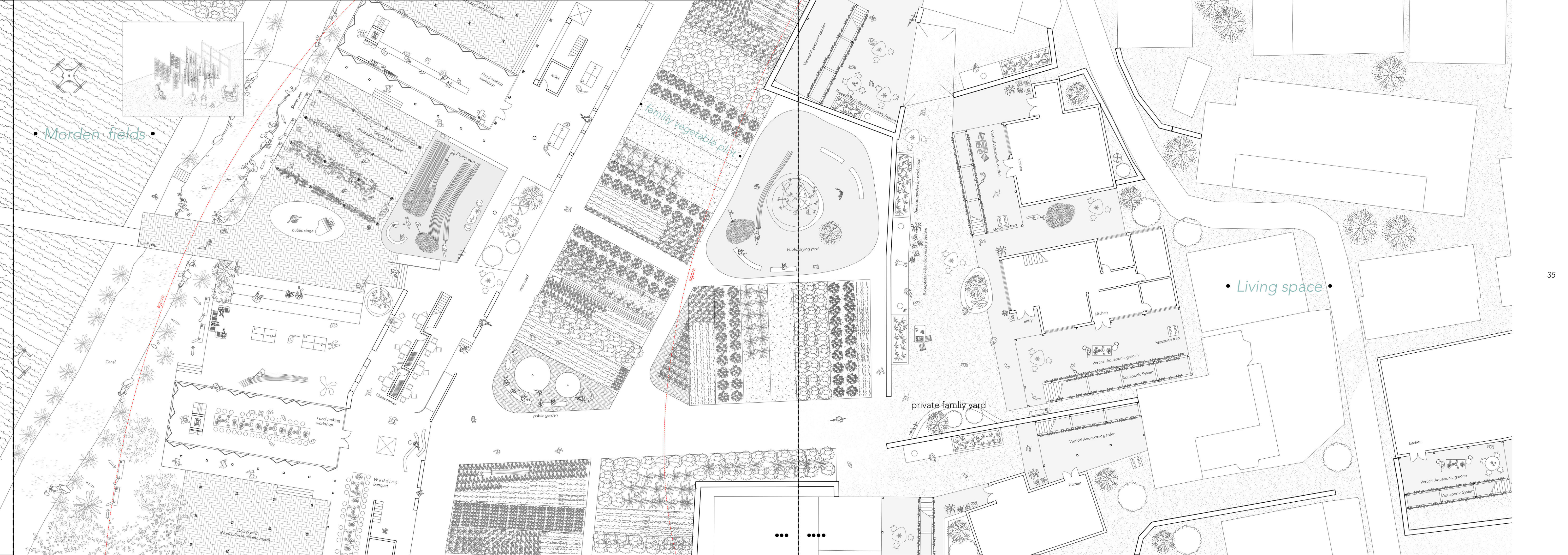
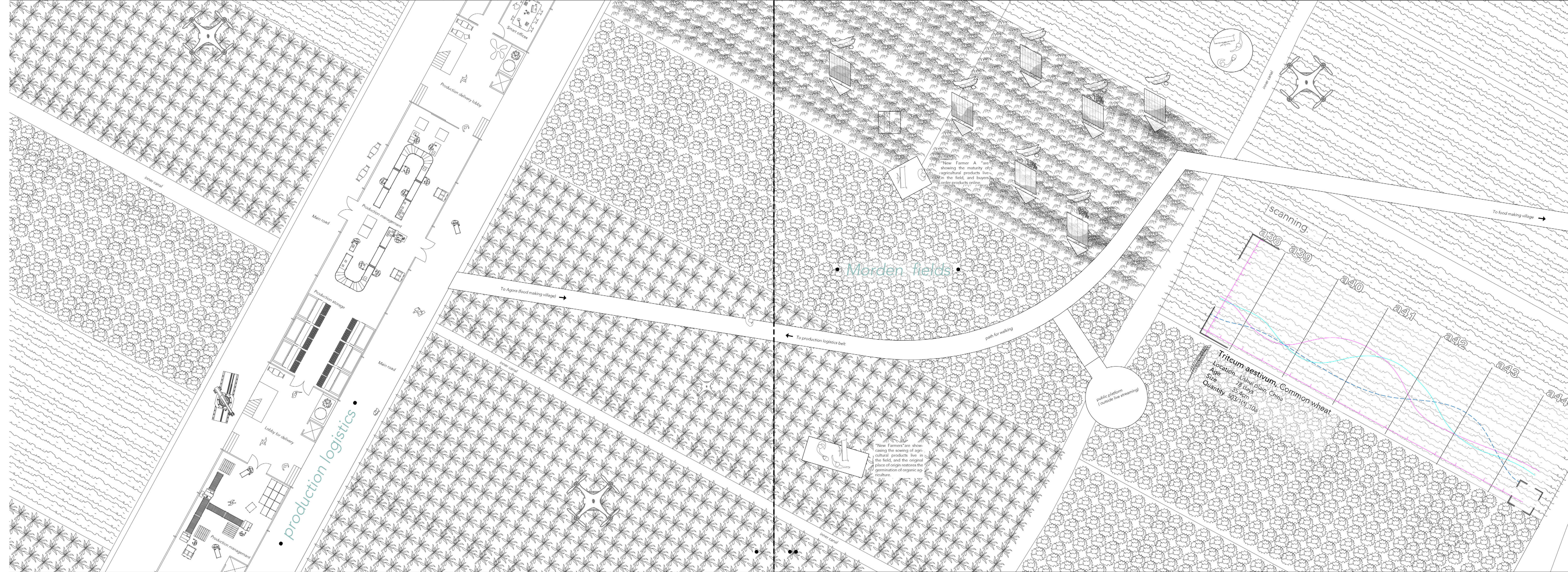


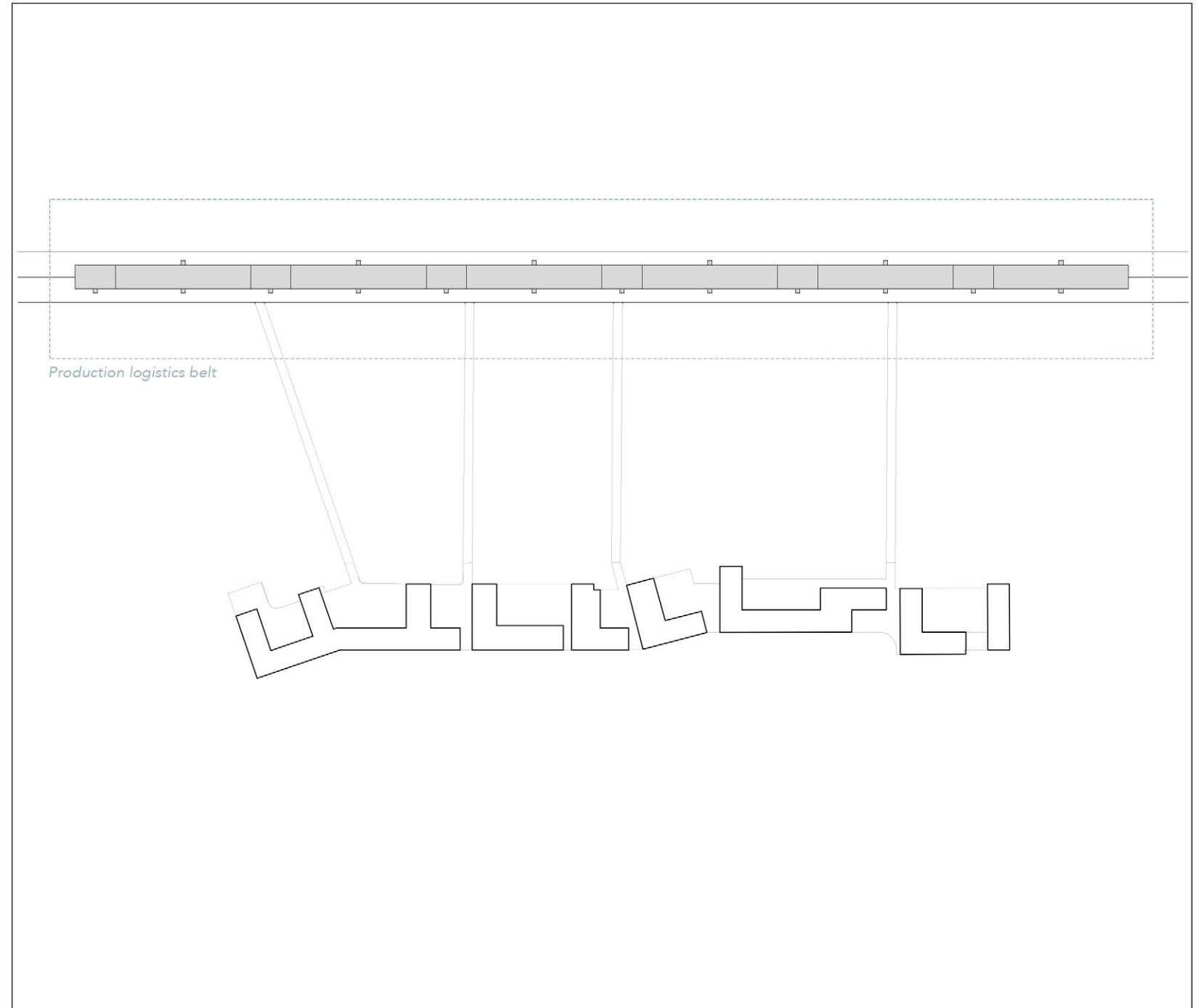
Master plan (selected part)



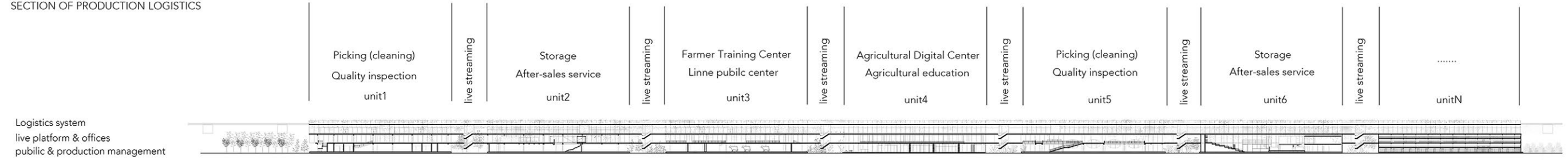


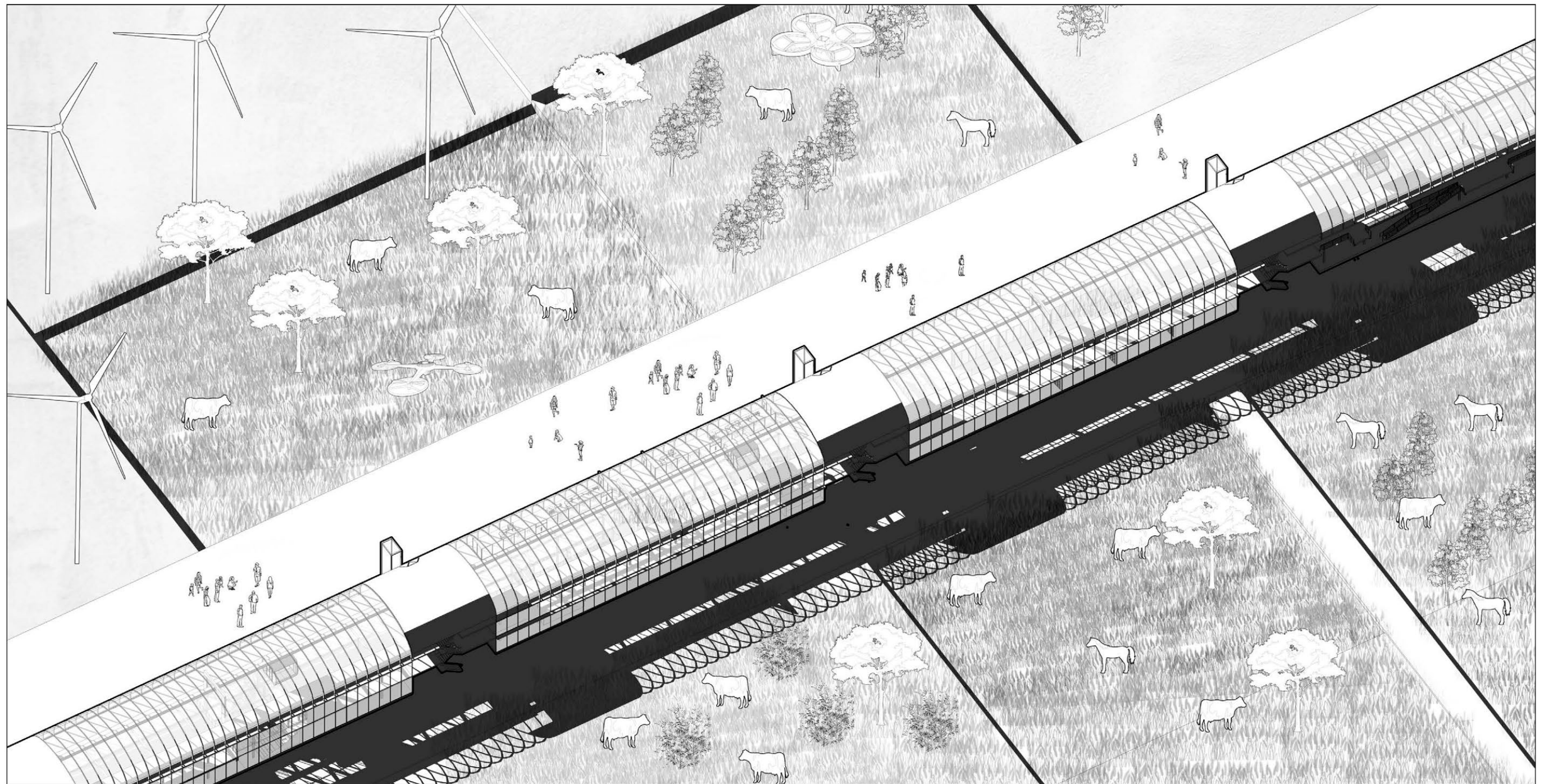


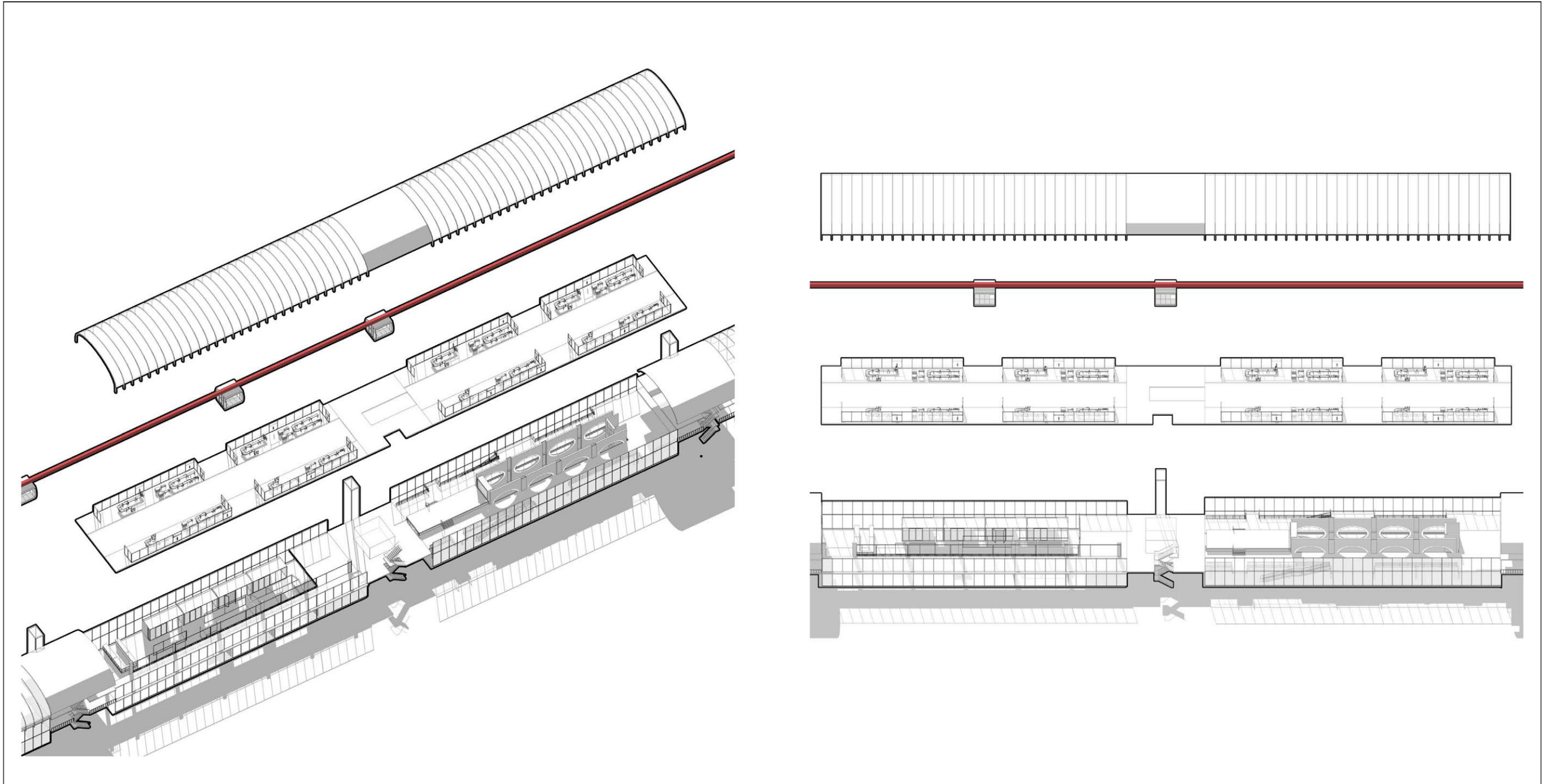




SECTION OF PRODUCTION LOGISTICS

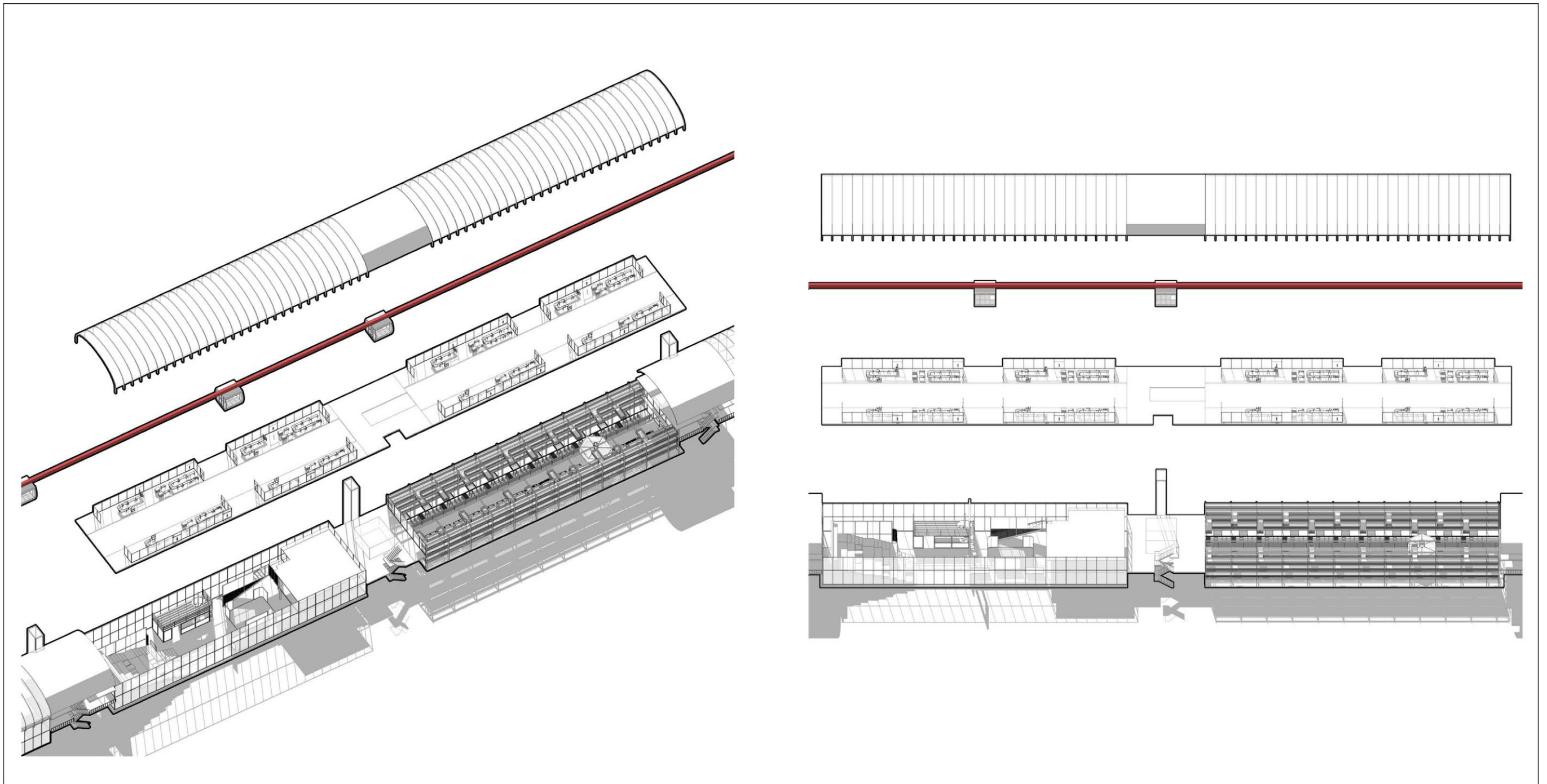






unit of storage and offices

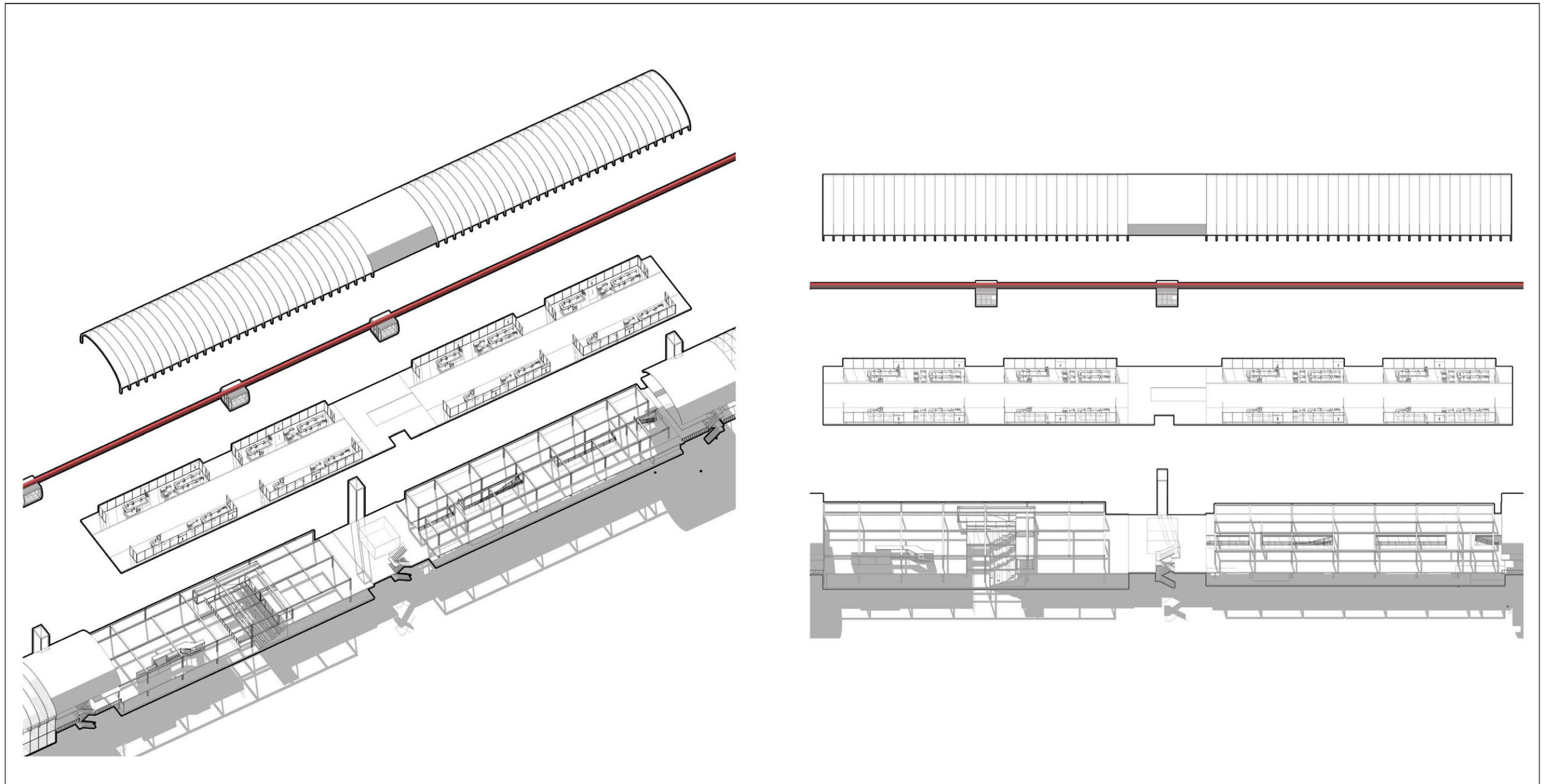
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unit of farmer training center

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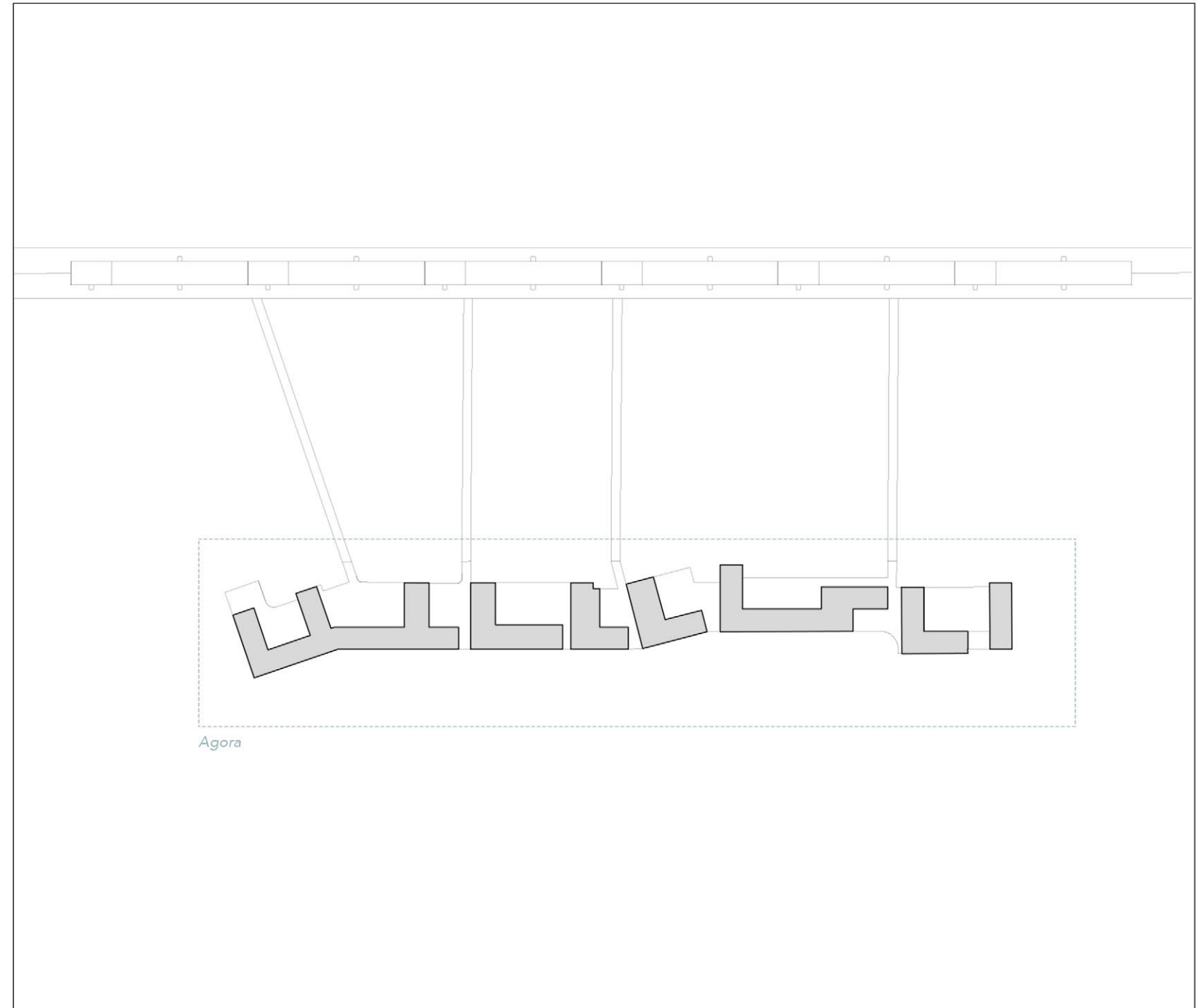
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unit of processing and assembling of agricultural products

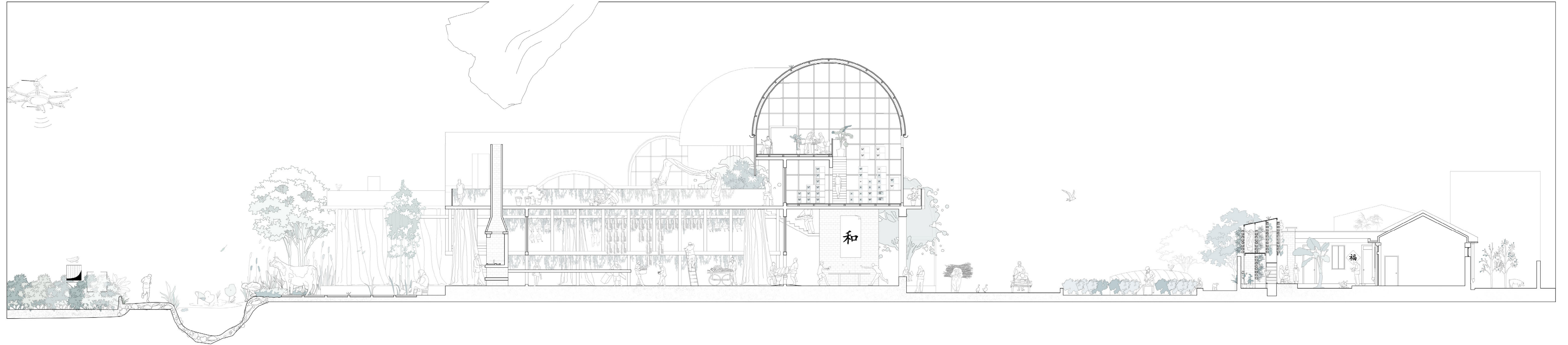
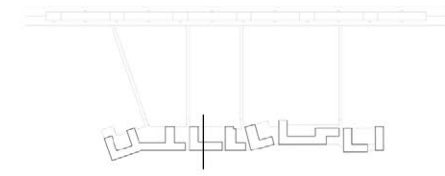








Section of agora and living spaces
0 5m

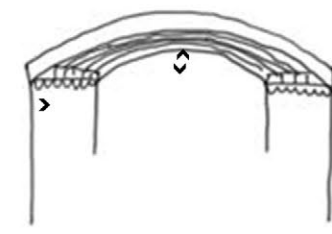


03.3/ Expanded Into "Agora"

In rural China, weddings and funerals are contracted, and foreign contracting companies mainly provide equipment and tents. The banquet is a very important social place in the daily activities of the villagers. And the banquet is a very frequent activity involving villagers. Most of the food used for banquet cooking is purchased in advance from the town center or the large vegetable market in the urban area.



Special trucks transport banquet equipment: tables, chairs and benches, gas and sound equipment, tents, etc.



The leased banquet tent (spring and summer) is supported by steel pipes.



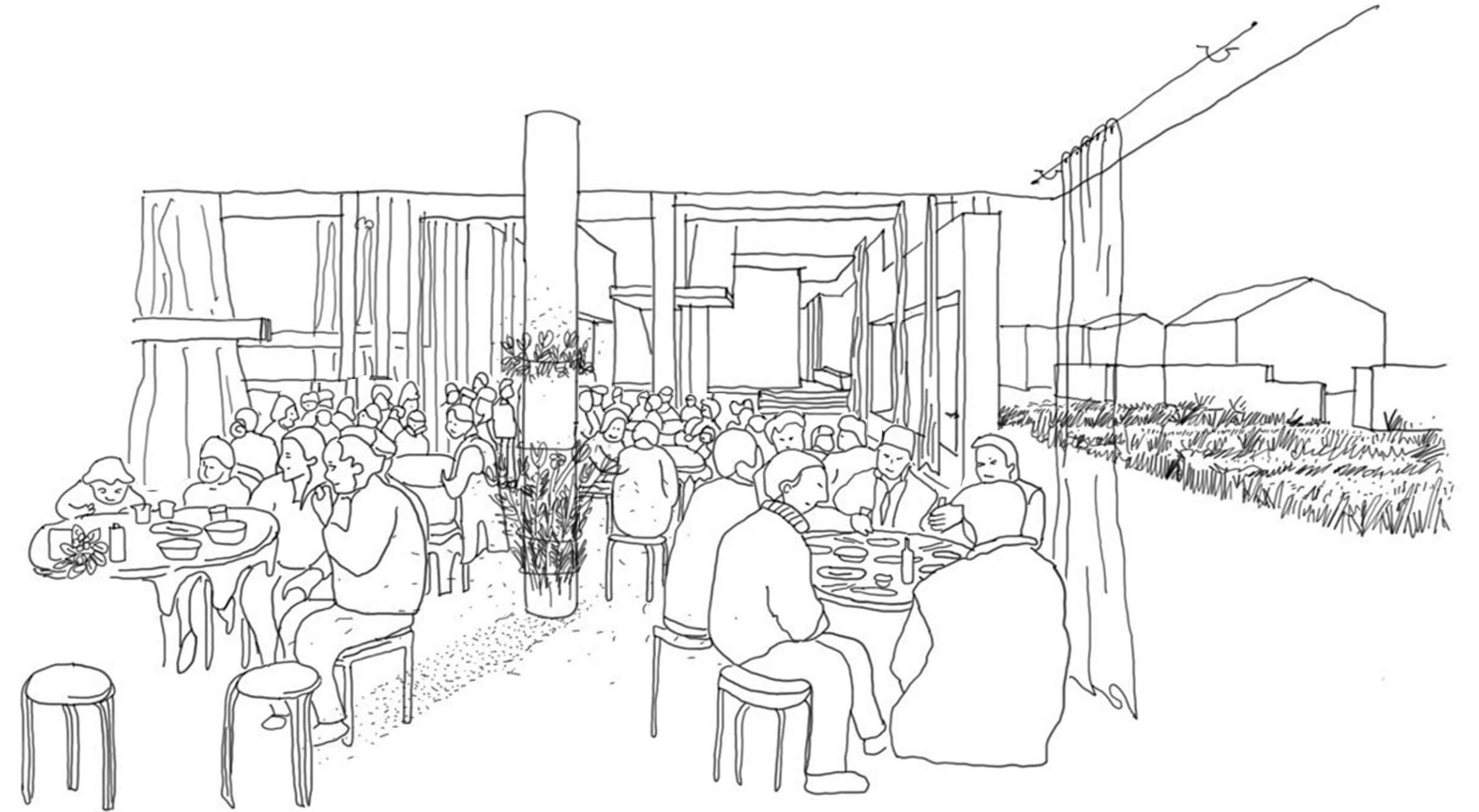
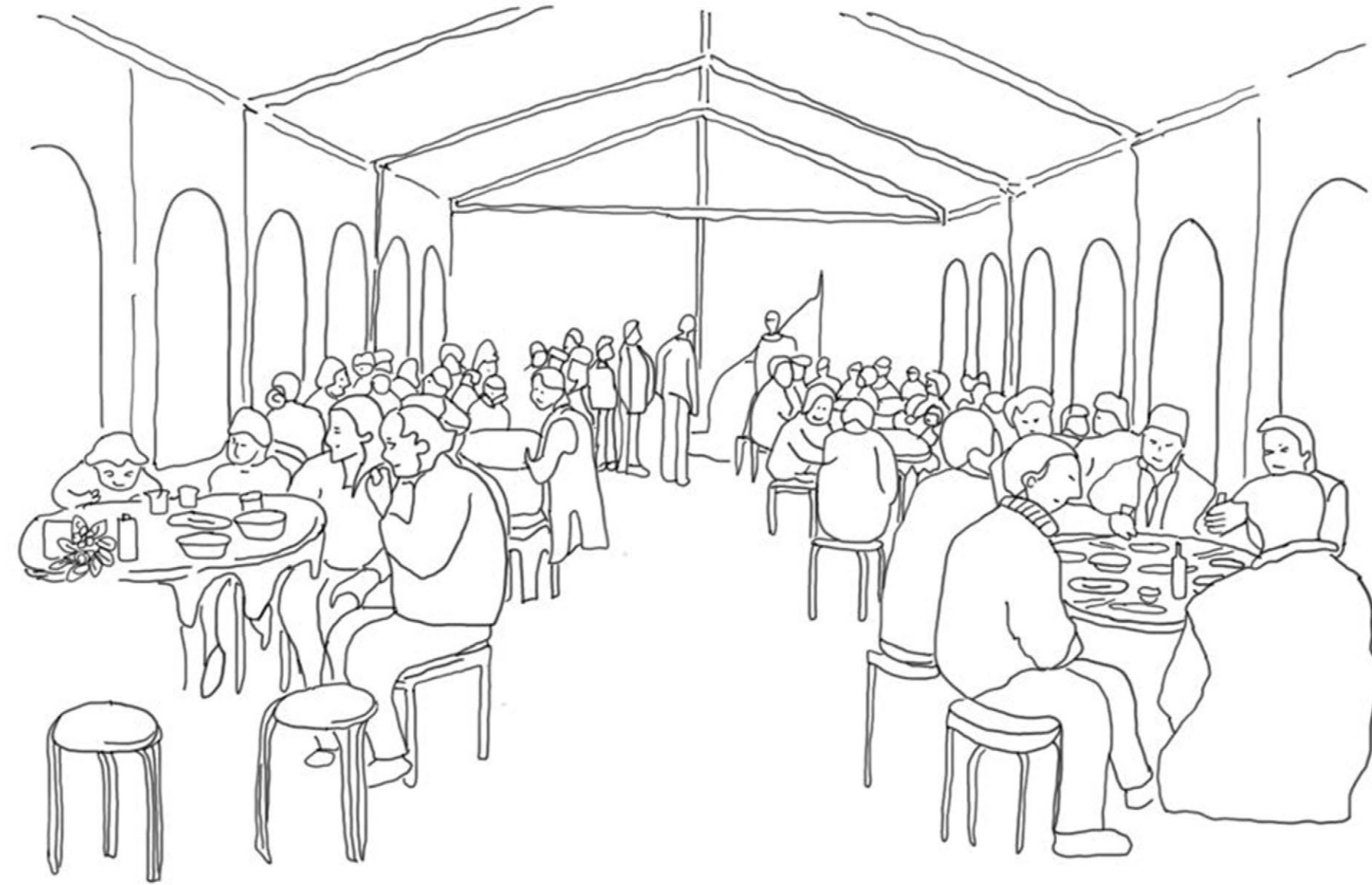
The leased banquet inflatable tent (autumn and winter) has the effect of heat preservation

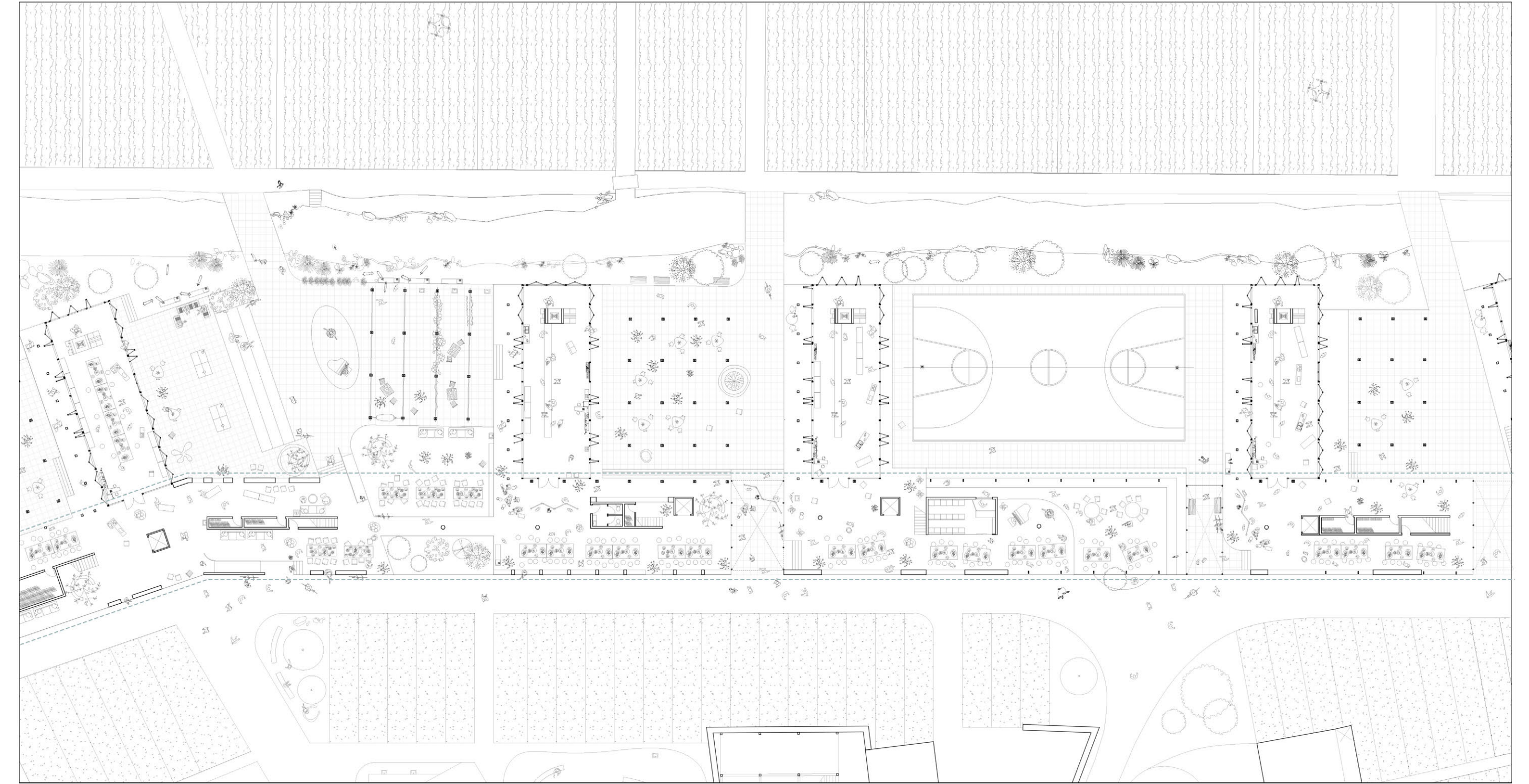


The villagers built a large stove in front of their homes to entertain almost all the villagers

The agora space is used for temporary banquets and group dining activities. Continuation of traditional food culture and the possibility of communication. The linear spatial organization also continues the spatial form of the traditional banquet tent, making the important behavior of traditional toasting occur. The adjustable screen of agora space also guarantees heat preservation and heat insulation to ensure the use of different times.

• New relations between living space and agriculture



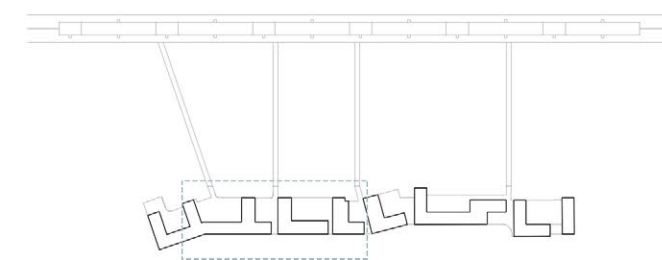


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Agora as a space for daily use

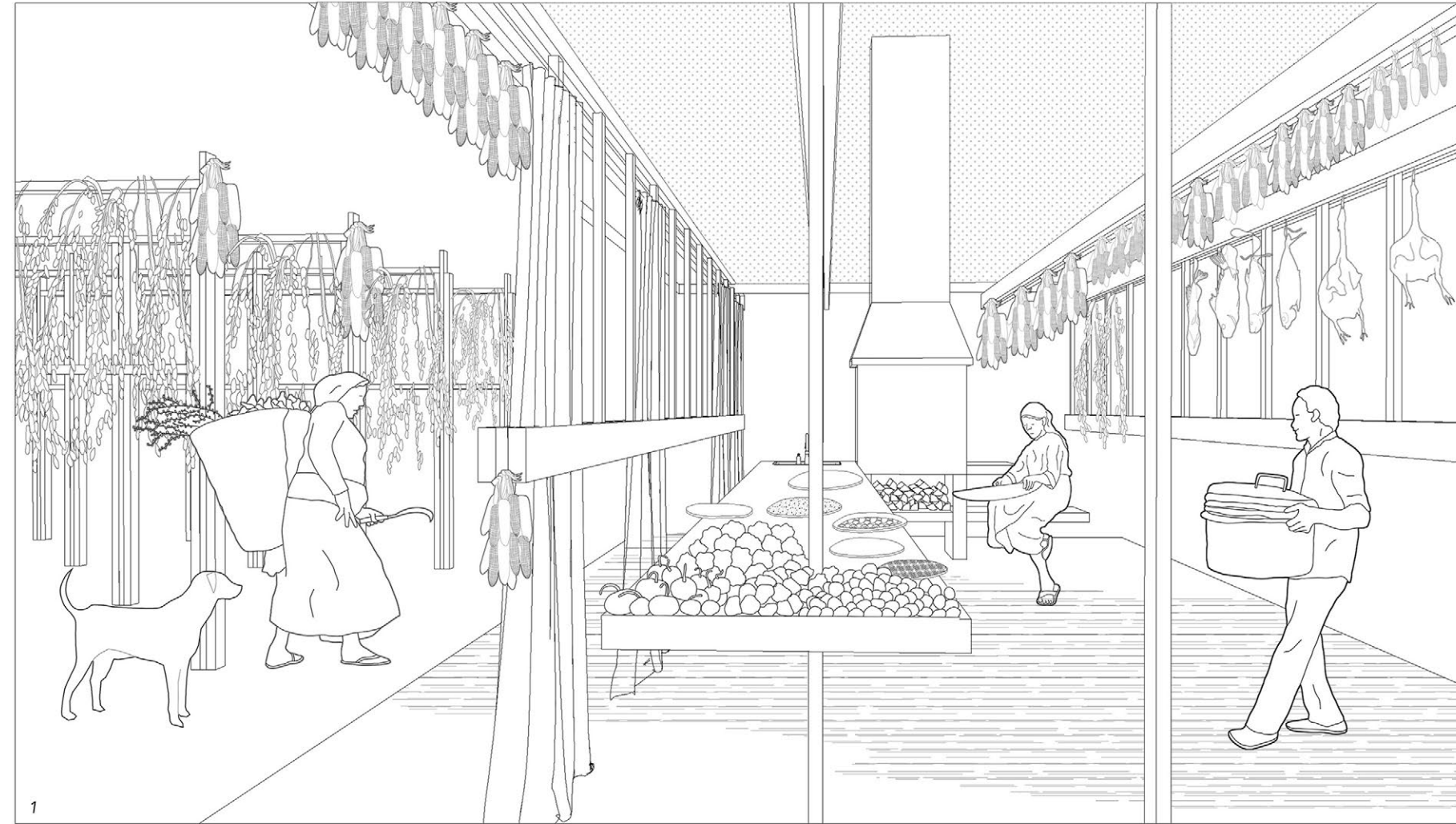
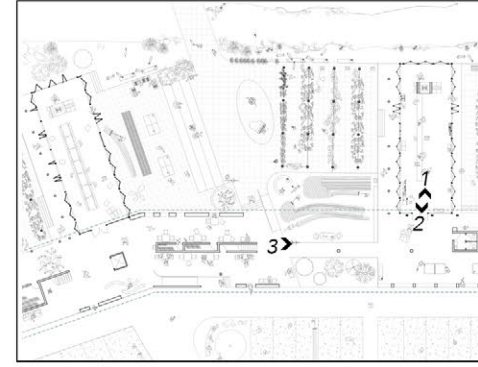
During daily use, it is used as a space for local food processing and public activities. Most of the space and hardened ground serve the processing, production, and packaging of traditional hand-made agriculture. Small clinics, commissaries, sports fields, vegetable markets, libraries and other public spaces are accommodated in linear spaces.



Agora as a space for local events

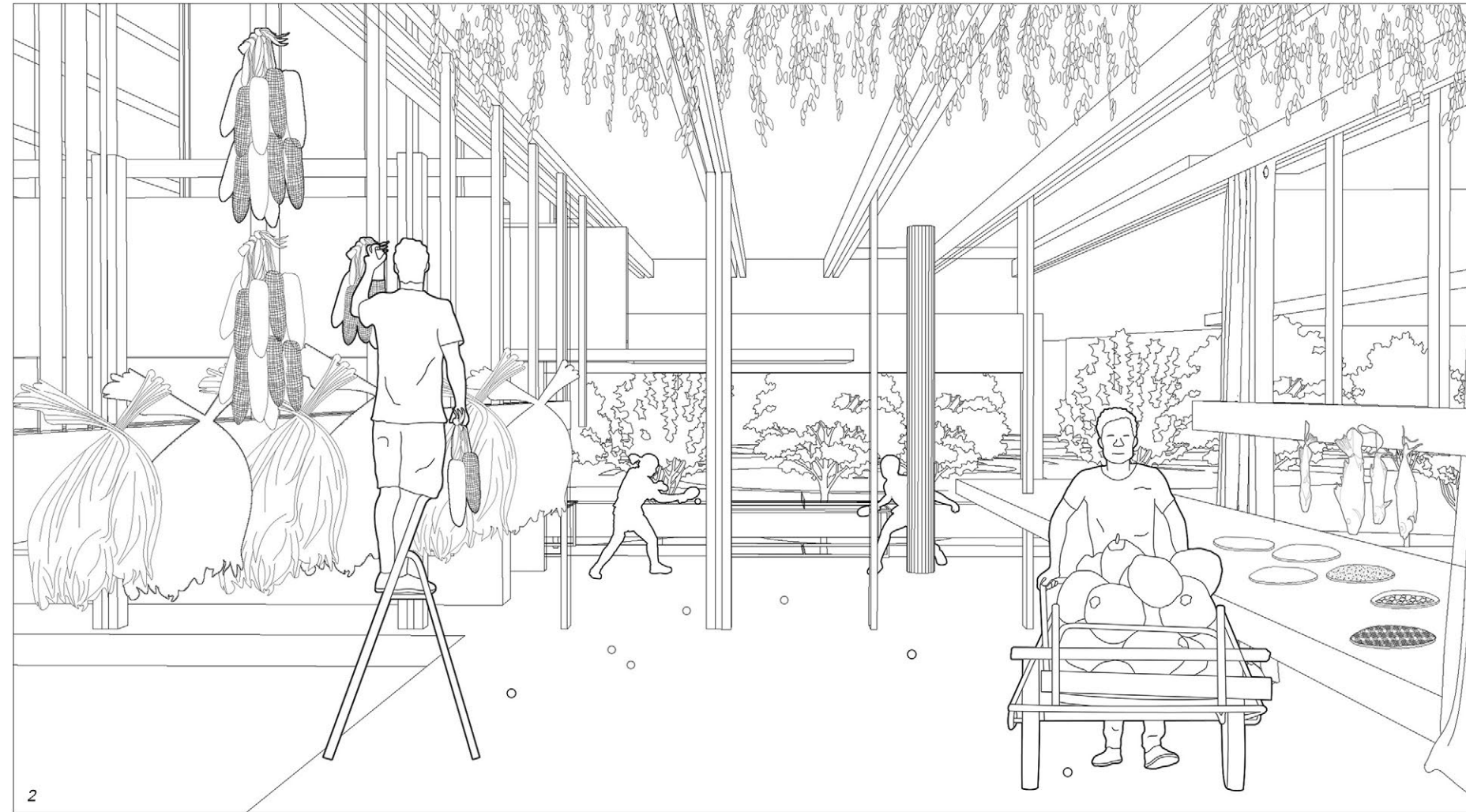
Marriage, birthdays, funerals, etc. are common things in rural China. These events will occur temporarily in agora space from time to time. Some food processing places were used as kitchens to provide services for the ceremony; the original public event space was used for banquets.

	Identity:	traditional farmer
	Work area:	"agora"
	Operating hours:	day-to-day
	Work content:	food making family garden cultivating production re-managment



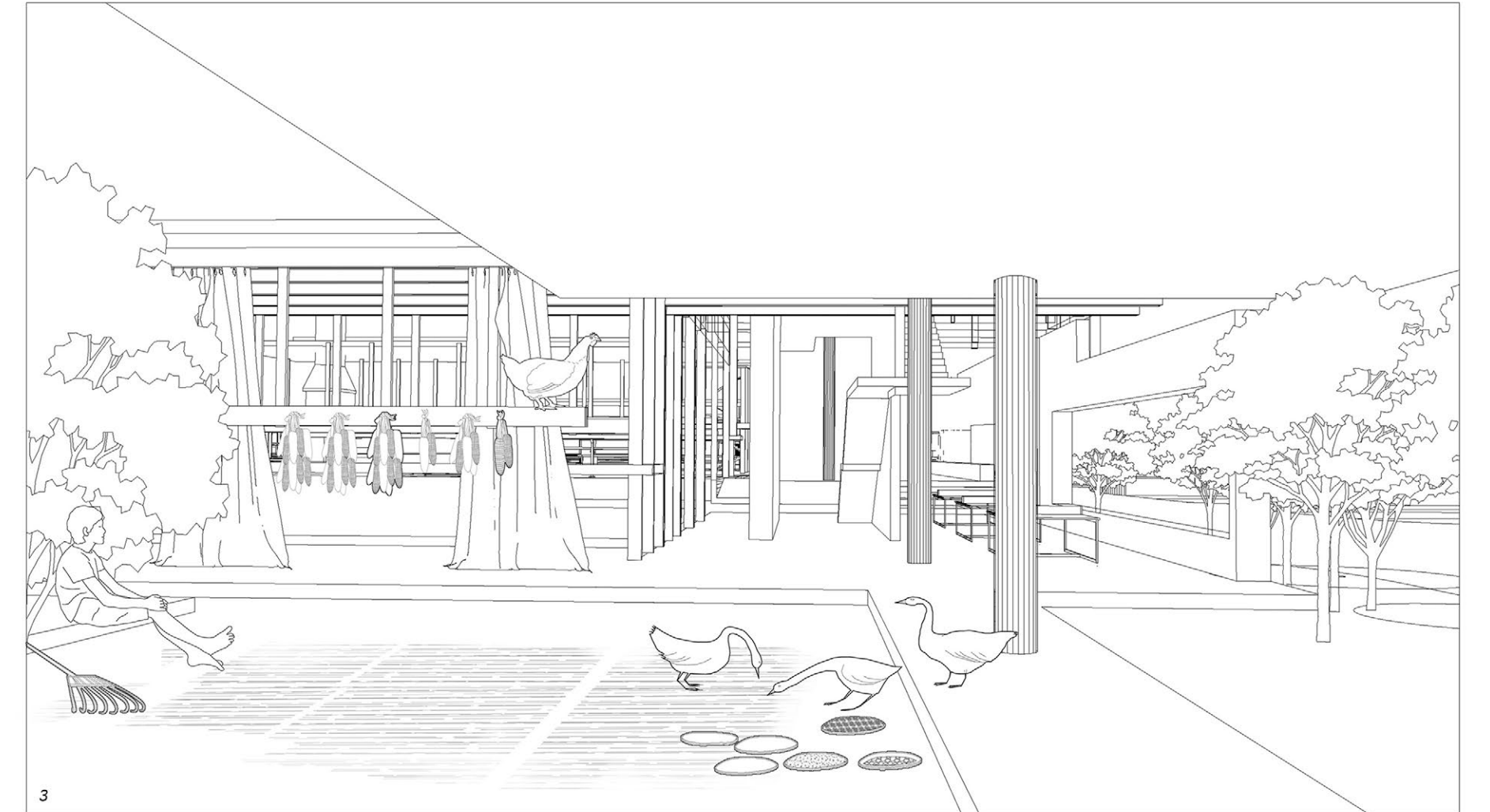
Process of food production

The surplus agricultural products (defective products) will be reprocessed by local farmers into food products, which are mainly supplied to local citizens. This is a traditional food processing workshop where agricultural products are processed in a traditional way. Drying, cooking, production, processing, and storage are all satisfied in different levels.



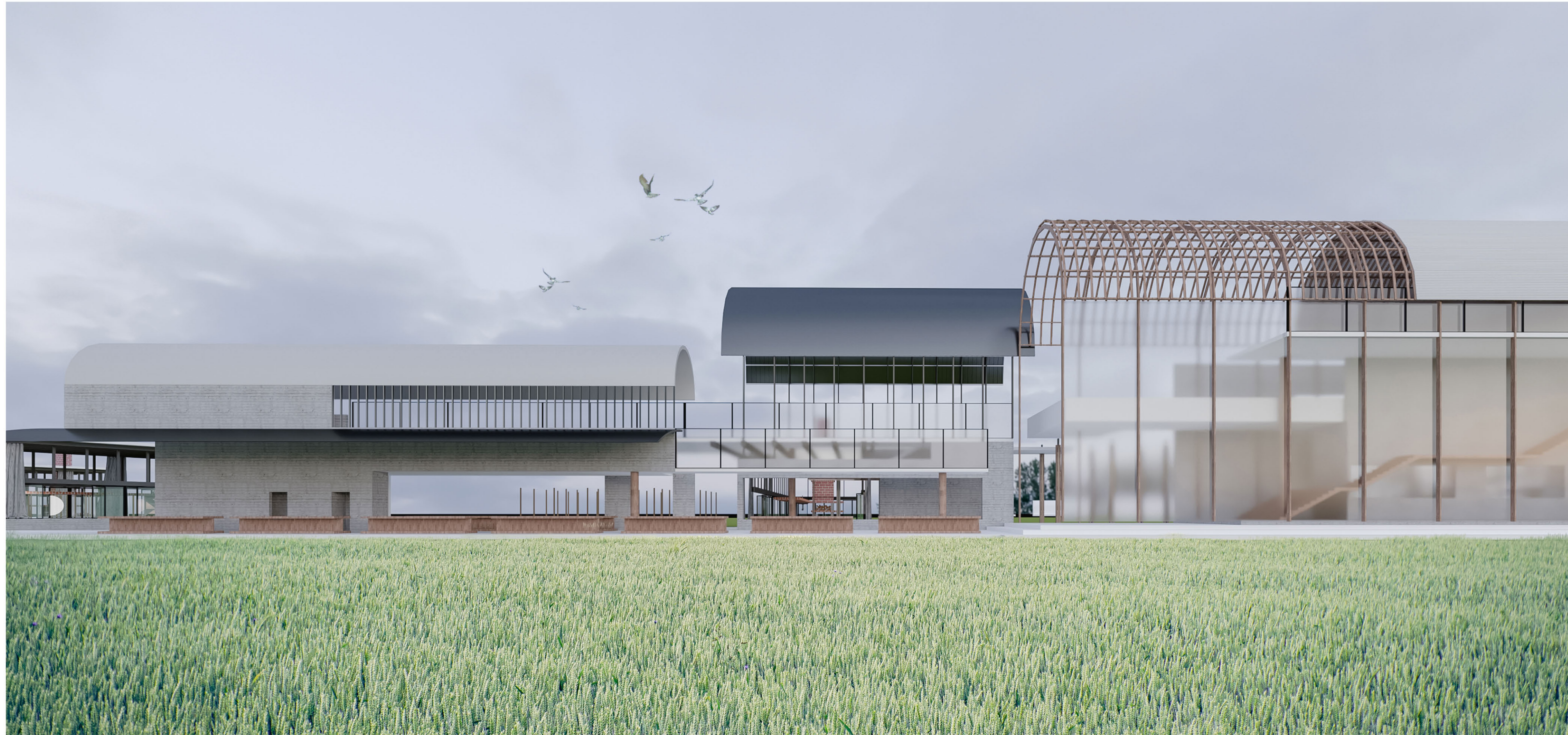
Publicity of food production

Some food production workshops are also open to public events. While continuing the daily life of farmers, the relationship between agricultural products and daily activities is re-established through the open overhead space.



Publicity of Agora space

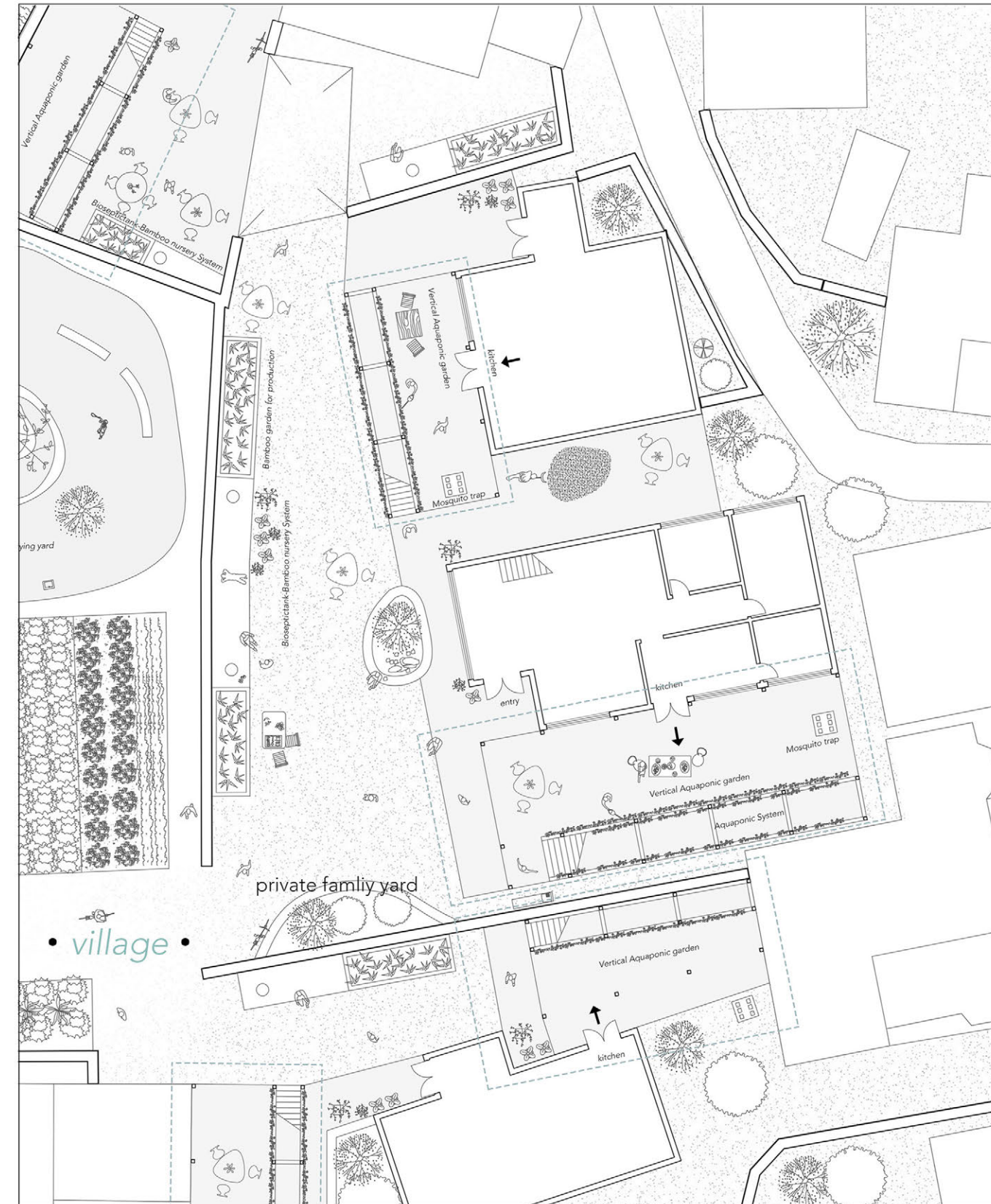
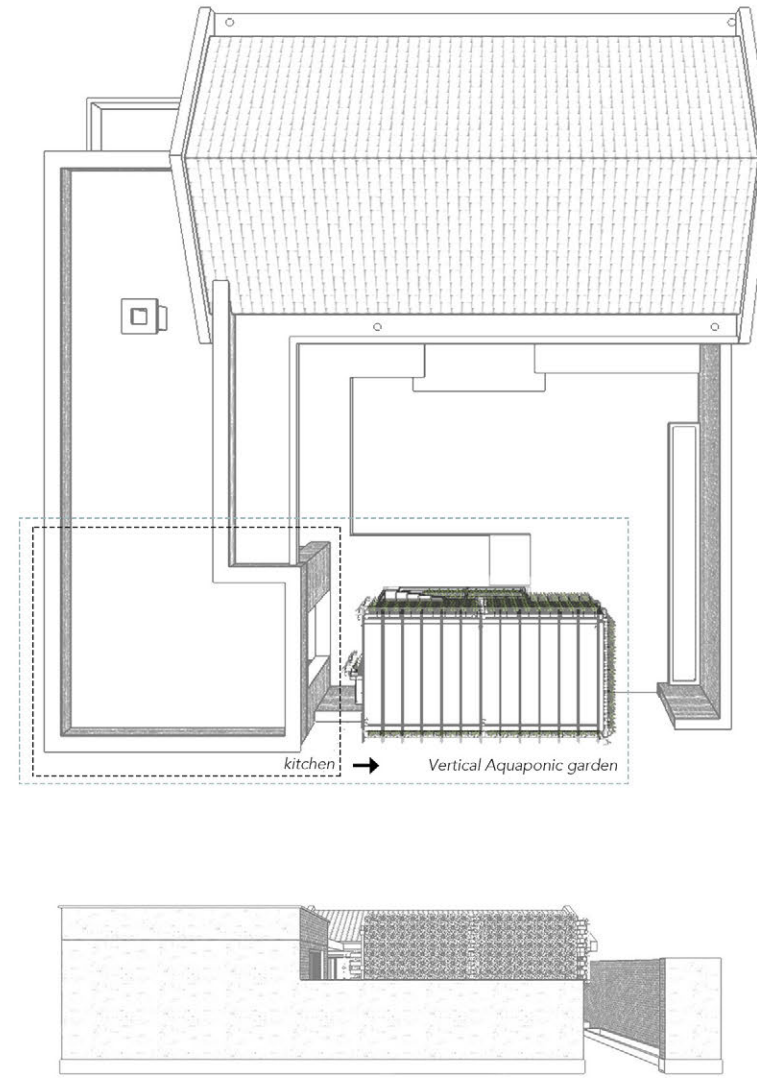
The new agora ground floor plays an important role during the autumn harvest: drying. Local rice and other grains can be dried in public spaces, stored, and then processed. The lively behavior interaction when continuing the traditional drying process.



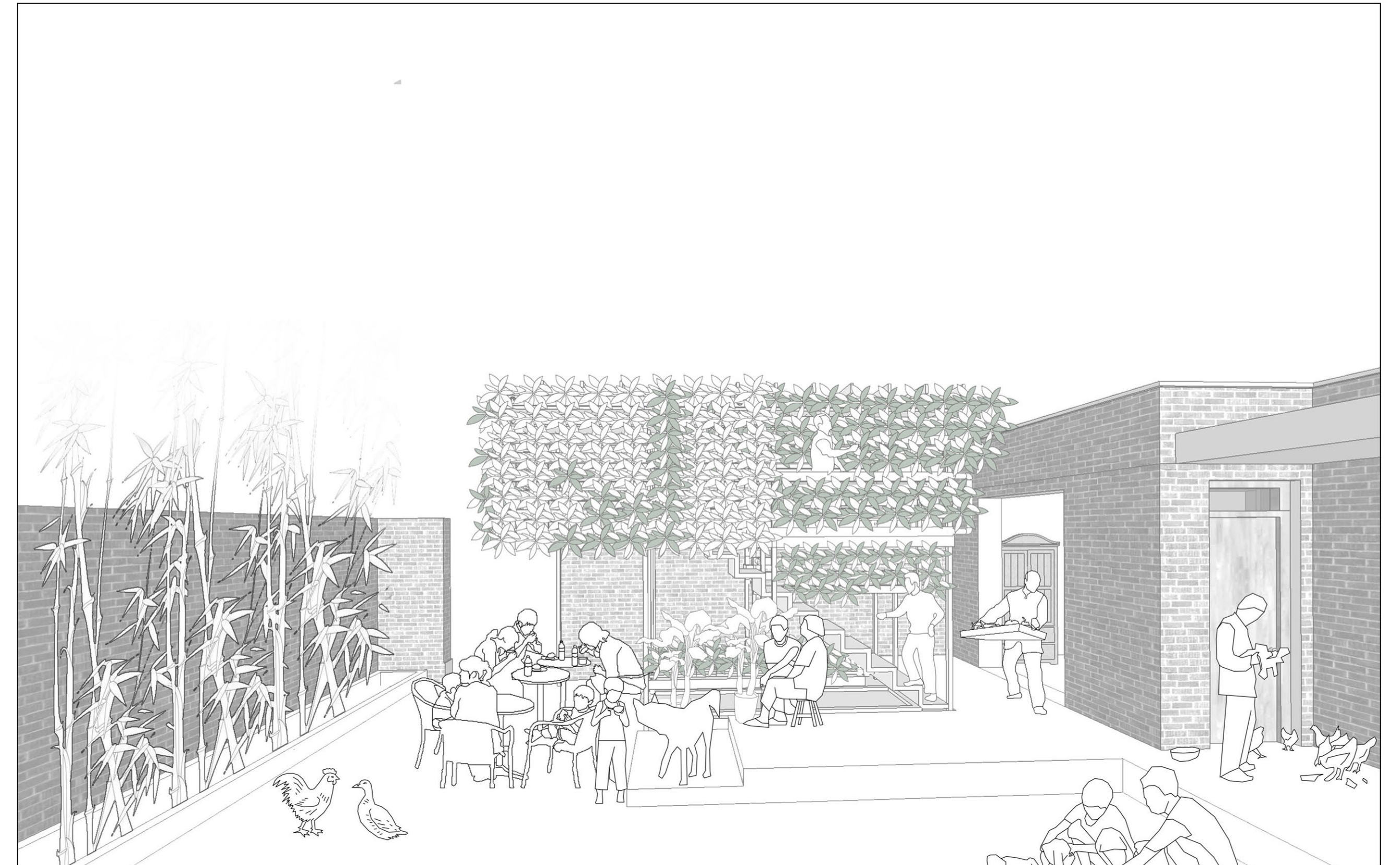




Because of changes in agriculture, farmers' homes are also spontaneously renewed in space. The yard where the sundries were originally piled was planned rationally and organically: attached to the original building, a kitchen accessory space with a vertical vegetable garden as the core was formed. Aquaponic System supports vertical vegetable gardens to provide fresh ingredients for daily diet. Bamboo will become part of the natural landscape in the yard and will be used by villagers to make daily farm tools. Due to the environment surrounded by agriculture and plants, mosquito traps are placed in the underground system to ensure the safety and comfort of the daily environment. Bamboo will become part of the natural landscape in the yard, because sustainable bamboo cultivation is used for villagers to make daily farm tools. Due to the environment surrounded by agriculture and plants, mosquito traps are placed in the underground system to ensure the safety and comfort of the daily environment.



Plans in urban view to show how the aquaponic garden shapes farmers new daily life



perspective drawing for the family dinner in new yard

