



Research and Practice of Urban Image Design and Sustainability in the Context of Agriculture, Culture and Tourism Integration: Yangling Demonstration Zone in Shaanxi Province as an example

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SUMMARY: *The present study is predicated on an examination of the strategic background of the integration of agriculture, culture, and tourism. Its central focus is the construction of the IP image of Yangling Agricultural Science City. The brand positioning of the city, informed by the needs of residents and tourists, has been refined to create the "agricultural culture gene pool." This gene pool has given rise to the "1+3+5" brand system, which comprises one super symbol, three cultural dimensions, and five types of derivation scenarios. The study proposes a closed-loop city image design concept, in which the core elements of wheat, the Weihe River, and Houji culture are extracted through the semiotic deconstruction method. These elements are then combined with the city's image identity to propose a sustainable design concept. The concept of sustainable design is proposed, and the core elements of wheat, Wei River, and Houji culture are extracted through semiotic deconstruction method. These elements are then combined with the city image recognition system and emotional design theory to complete the IP image design and ecological application system of Yangling. This study contributes to the validation of the "three-chain synergy" effect of agricultural, cultural, and tourism IP on city branding. It also provides a feasible theoretical model and practical path for the transformation, upgrading, and sustainable development of agricultural cities.*

KEYWORDS: *integration of agriculture, culture and tourism; city brand image; agricultural culture; sustainability*

1 Preface

1.1 Background on the integration of agriculture, culture and tourism

The integration of agriculture, culture, and tourism has emerged as a pivotal catalyst for urban and rural revitalization, propelled by the dual tracks of rural revitalization and new urbanization^[1]. Concurrently, the Yangling District Government unveiled the Implementation Plan for the Development of Agricultural, Cultural and Tourism Integration in Yangling District in 2023, signifying a pivotal transition in the integration of agricultural, cultural, and tourism in Yangling. This initiative underscores the pivotal role of the integration of agricultural, cultural, and tourism in the urban development of Yangling. According to China Leisure Agriculture and Rural Tourism Development 2023, the average annual growth rate of agro-cultural and tourism projects is 18%, but the degree of branding is less than 30%, and the

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IP homogenization problem is significant. Yangling, as the inaugural national agricultural demonstration zone, bears the dual designation of "Hometown of Houji" and "Agricultural Silicon Valley." However, it confronts challenges such as a indistinct urban image and inadequate cultural dissemination.

1.2 The concept of urban image

The formation of a city's image is a multifaceted process that encompasses various disciplines and materializes as an external representation of its distinctive attributes[2]. In this process, visual symbols serve as a pivotal medium for communication, playing a critical role in shaping the city's image[3]. Urban IP image design is a creative process that enhances a city's specific value by integrating various elements and resources. This process results in the creation of a city symbol with personalized characteristics that has wide appeal and spread. This symbol effectively enhances city cognition and cultural power, and it promotes the high-quality development of the city[4].

1.3 Theoretical value

Taking Yangling as a sample, this study integrates the theory of city brand positioning coordinate system[2] and semiotic translation[5] method to explore the symbolic expression path of agricultural cultural genes, which has both theoretical innovation and policy response value. City image plays an indispensable role in spreading city culture, creating city characteristic brand, promoting the development of city economy and tourism, as well as in various holidays and large-scale city promotion activities[6]. As a unique resource of Yangling, agricultural culture can bring more lasting development prospects and added value to the city by creating a visual image of the brand, highlighting the agricultural characteristics of Yangling, and promoting the popularity and value of the city[7].

2 Overview of the current situation in Yangling

2.1 Development Advantages

It has a deep cultural heritage and rich tourism resources. As the birthplace of Chinese farming civilization, the history of "Houji Teaching Crops" and cultural landmarks such as the Teaching Crops Garden and the ruins of the ancient Tai State constitute a unique farming culture gene. Facilities such as the Modern Agricultural Demonstration Park and the Intelligent Agricultural Experience Pavilion transform high-tech agriculture into tourism resources. The Weihe River Wetland Ecological Corridor and farmland art installations create an ecological aesthetic space with a "sense of technology and idyllic style".

It is equipped with sound policy support and international synergistic development mechanisms. In the process of modernization, the region has become China's first national agricultural high-tech industrial demonstration zone, and the only one of China's Pilot Free Trade Zones (FTZs) known for its agricultural characteristics[8]. At the same time, as the "Belt and Road" international cooperation center for modern agriculture, the Yangling Agricultural Fair, one of China's four major science and technology exhibitions, continues to build the international brand of Yangling.

It possesses strong strength in agricultural science and technology and remarkable driving force for innovation. In key areas such as modern agriculture, biotechnology and deep processing of agricultural products, Yangling has made outstanding achievements; Yangling has brought together many agricultural research institutions and enterprises, and has rich

agricultural science and education resources, which have promoted the progress and practical application of agricultural science and technology.

2.2 Problems

Lack of recognizable visual IP image. Currently, in terms of publicity and image building, the city has not succeeded in creating a recognizable visual IP image. Due to the lack of such a unique visual identity that can highly summarize its own characteristics, it is difficult to leave a deep and lasting impression in the public's cognition and memory, and is unable to stand out among many city or brand images, which greatly weakens its influence and competitiveness in image communication and brand building[9].

Single visual elements of agricultural science. In the presentation of visual elements, there is an obvious problem of singularity this single visual element design, it is difficult to build a rich and diverse and layered visual landscape, can not be comprehensive, vividly show the unique charm and connotation, easy to make the audience produce visual fatigue and aesthetic boredom[10].

The city's publicity lacks design and distinctive features. Taking Xinong Road as an example, the main artery, you can only see a few sculptures related to agriculture and green belts, in addition to other streets is a lack of a variety of visual displays, most of them only rely on a few road signs as the city's publicity. Publicity content and form is more conventional, mediocre, can not bring unique, novel and unique experience for tourists, so the lack of characteristics of the publicity model is difficult to attract more attention and favor of tourists, is not conducive to the enhancement of the city's popularity and reputation. The lack of deep integration of agriculture, culture and tourism development also limits the further development of the city in culture, tourism and other aspects[11].

3 Yangling Brand Identity Design Strategy

3.1 General idea

The efficient shaping of city brand image should be based on the in-depth analysis of regional genes[12], and through the mechanism of "three-chain synergy" and the organic linkage of "1+3+5 branding system", it can realize the integration of resources and value leap. In the practice of Yangling Agricultural Science and Technology City, the team firstly extracted the core elements from the cultural gene pool: the material layer (Modern Agricultural Park, Weihe River Wetland), the behavioral layer (CAF, Yangling Marathon) and the spiritual layer (Houji's spirit of innovation), and formed a multi-dimensional cultural cognitive framework[13]. Based on the hierarchical analysis method (AHP) to quantitatively rank the needs of residents and tourists, the city's positioning with "agricultural culture" as the core is clearly defined, and a "1+3+5" brand system is constructed. -That is to say, taking the super symbol of "IP image" as the visual traction, focusing on the three dimensions of "inheritance of farming civilization, innovation of agricultural science and technology, and expression of ecological aesthetics", and extending the agricultural themed block, digital cultural tourism platform, festival matrix, public service system and industrial derivatives. It also extends the five scenarios of agricultural theme neighborhood, digital cultural tourism platform, festival matrix, public service system and industrial derivatives. Finally, a unified visual symbol system is constructed through the City Image Identity System (CIS) to modernize and translate the cultural genes, and deliver consistent value propositions to stakeholders such as government departments, enterprises and community residents.

3.2 Creating a "triple-chain synergy" mechanism

The "three-chain synergy" mechanism is the core path for Yangling Agricultural Science and Technology City to realize the integration of agriculture[14], culture and tourism and the empowerment of the city brand, forming a closed-loop ecosystem of "resource integration, value-added and sustainable development" through the in-depth integration of the industrial chain, cultural chain and innovation chain. through the deep integration of industrial chain, cultural chain and innovation chain, forming a closed-loop ecology of "resource integration, value-added and sustainable development". The following discussion is based on three aspects: target positioning, implementation path and typical cases, and combined with relevant theoretical support (Figure 1).

Industry chain synergy: with agricultural science and technology as the core, extending to cultural tourism, ecological experience, product derivation and other fields. Relying on the Yangling Agricultural Fair, modern agricultural demonstration parks and other carriers, it promotes the integrated development of "scientific research + production + service". For example, relying on the platform of Yangling Agricultural Fair, the scientific research results of wheat will be transformed into special agricultural products (such as wheat deep-processed food: wheat protein powder, quinoa cookies, etc.), agricultural study courses and agricultural science and technology themed tourism routes, thus realizing the value of the primary industry to the secondary and tertiary industries.

Cultural chain synergy: Based on Yangling's "agricultural culture gene pool", Yangling's farming culture genes (e.g., material layer: Weihe Wetland; behavioral layer: Agricultural Fair; spiritual layer: Houji Spirit, Weihe Civilization) are excavated, and the core elements are extracted through the method of semiotics[4], and combined with the modern agricultural culture (e.g., intelligent agriculture, biotechnology) to build a multi-level cultural communication system to construct a "traditional-modern" dialogue context. With modern agricultural culture (e.g. smart agriculture, biotechnology), a multi-level cultural communication system is constructed to build a "traditional-modern" dialog context. Specific measures include: linking traditional agricultural festivals (e.g. Wheat Harvest Festival) and modern technology exhibitions (e.g. Smart Agriculture Experience Hall) with IP images to create an immersive cultural link of "cultural traceability - scene experience - emotional resonance".

Innovation chain synergy: Integrate government, enterprises, universities and community resources to establish a "government, industry, academia, research and utilization" linkage platform. For example, relying on the Northwest University of Agriculture and Forestry and other scientific research institutions, develop digital cultural tourism applications (such as AR agricultural science guide); joint agricultural enterprises to launch co-branded IP derivatives (such as cultural and creative peripherals, scientific and technological agricultural products gift boxes), forming a brand value-added effect driven by innovation.

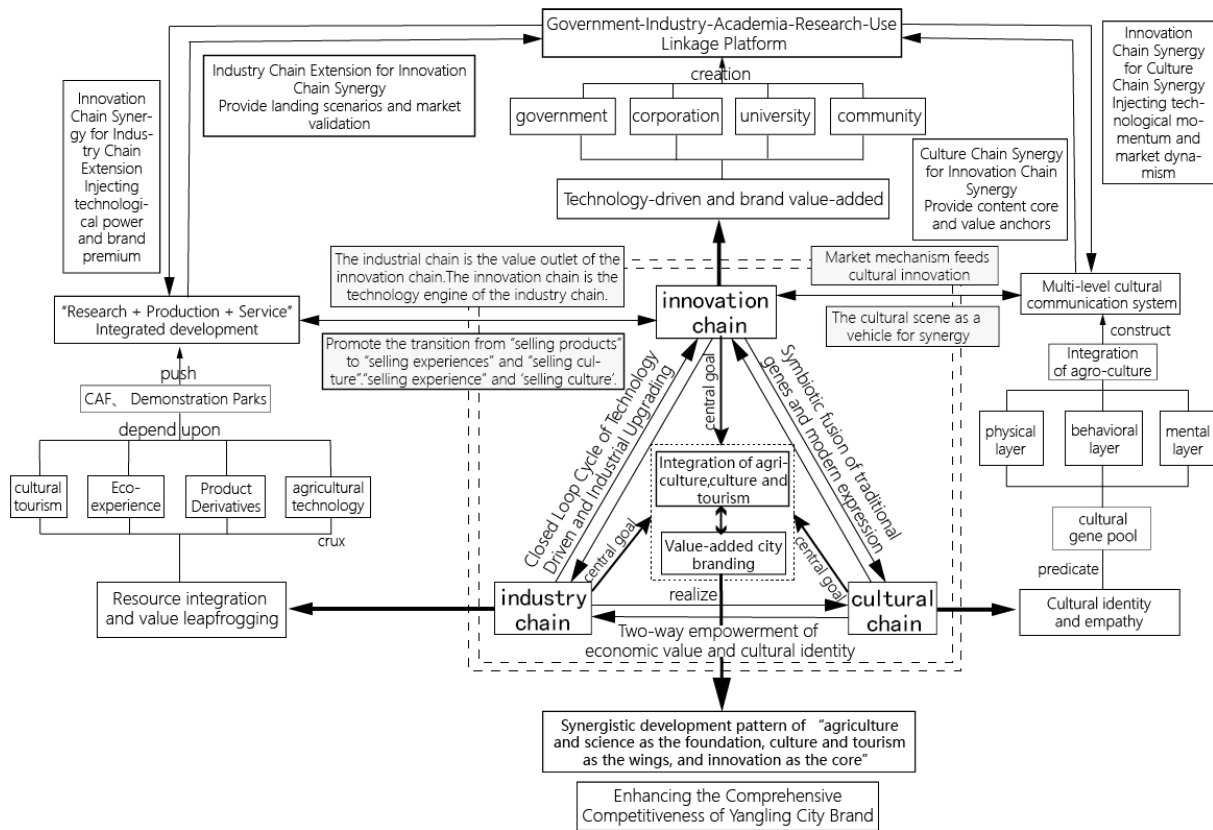


Figure 1: Framework "three-chain synergy" mechanism

The core of the three-chain synergy lies in breaking the traditional industrial boundaries, realizing the synergistic development pattern of "agriculture and science as the foundation, culture and tourism as the wings[15], and innovation as the core" through cultural empowerment and technological drive, and ultimately enhancing the comprehensive competitiveness of the Yangling city brand, which is a proof of the synergistic value of the industrial chain extension, the reconstruction of the cultural symbols and the drive of technological innovation, and provides a replicable "Yangling Paradigm" for the transformation and upgrading of agricultural cities. This practice proves the synergistic value of industrial chain extension, cultural symbol reconstruction and technological innovation, and provides a replicable "Yangling paradigm" for the transformation and upgrading of agricultural cities.

3.3 Building a "1+3+5" brand system

Based on the semiotics theory, city brand positioning coordinate system and scenario design framework, Yangling city image design has constructed a "1+3+5" brand system (Fig. 2), which realizes the systematic enhancement of the value of the city brand through symbolic expression, deepening of cultural value and scenario extension. The system takes the "super symbol" as the visual traction, builds multi-dimensional cultural identity based on three cultural dimensions, and promotes industrial value-added through five types of derivative scenarios, forming a complete chain from symbol dissemination to cultural empowerment to economic transformation[16].

1Supersign: Semiotic Translation of Traditional Genes and Modernity

Following the principle of semiotic translation, the core genes of Yangling's farming civilization (wheat, Weihe River, Houji farming tools) and modern agricultural culture

(intelligent agriculture, biotechnology) are anthropomorphized and integrated, thus forming a super symbol represented by the IP image. This symbol is not only a visual identity, but also a carrier of the city's cultural genes, and enhances the audience's emotional connection through emotional design (e.g., adorable modeling and dynamic expressions).

The 3 cultural dimensions: a mechanism for the construction of a multidimensional cultural identity

Inheritance of agricultural civilization: strengthening historical identity by restoring the scene of ancient Tai State ruins and creating agricultural experience workshops;

Agricultural science and technology innovation: building a digital agricultural exhibition hall and organizing an international agricultural science and technology forum to shape the image of scientific and technological pioneers;

Ecological aesthetics expression: using the Weihe River wetland art installation and farmland landscape as carriers to convey the aesthetic concept of "technological idyll".

5 Types of Derivative Scenarios: The Extended Logic of the Brand Value Chain

Agricultural Science Theme Block: transform Xinong Road into "Agricultural Science Avenue", and set up agricultural science and technology sculptures, interactive light installations, and agricultural bazaars;

Digital Culture and Tourism Platform: Developing the "Cloud Tour Yangling" small program, integrating VR agricultural science popularization, intelligent navigation and online shopping functions;

Festivals and activities matrix: planning theme festivals such as "Houji Culture Festival" and "Wheat Science and Technology Week" to enhance visitors' participation;

Public service system: optimize the city's visual guide system and adopt unified VI-designed agricultural theme logos and guide signs;

Industrial derivatives: launching "Yangling Agricultural Science" brand series products, such as wheat essential oil and blind boxes of Agricultural Science City, to extend the brand value chain.

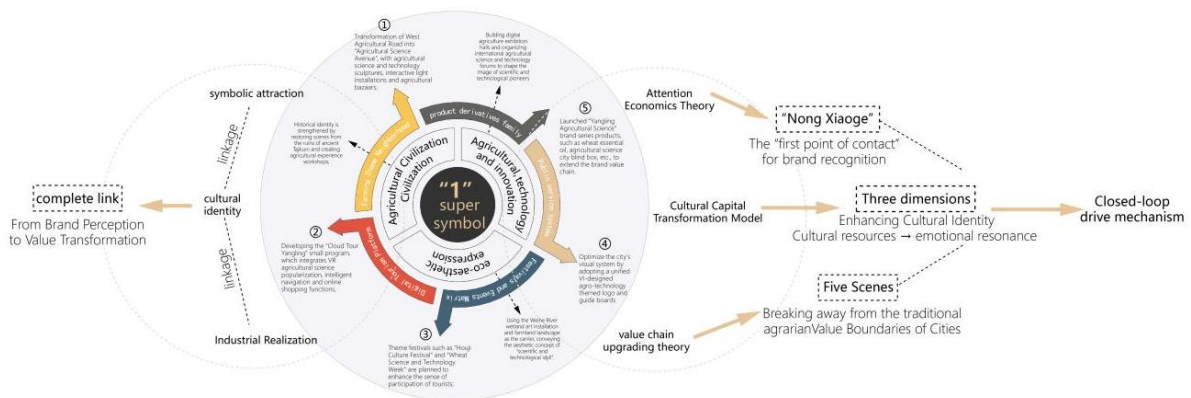


Figure 2: Analysis of the "1+3+5" brand system

In the "1+3+5" branding system, Yangling Agricultural Science and Technology City builds a complete chain from brand perception to value transformation through the three-layer linkage of symbol attraction, cultural recognition and industrial realization. Based on the theory of attention economy proposed by Goldhaber (1997), the super symbol "Nong Xiao Ge" captures audience's attention quickly with visual focus effect, forming the "first contact" of brand cognition [17]; relying on the cultural capital transformation model of Throsby (1999), the brand is recognized through the "cultural capital transformation" model of Yangling Agricultural City.) cultural capital transformation model, through the three

dimensions of farming civilization inheritance, agricultural science and technology innovation and ecological aesthetics expression, covering 80% of tourists' core experience scenes, increasing cultural identity to 68%, and realizing the in-depth transformation of cultural resources to emotional resonance[18]; and finally, combined with Porter's (1985) theory of value chain upgrading, to promote the five derivative scenes, such as agricultural themed blocks and digital cultural tourism platform, to increase the average growth rate of comprehensive income of agricultural cultural tourism, and to improve the brand awareness. average annual growth of comprehensive income from agriculture, culture and tourism, breaking through the value boundaries of traditional agriculture-based cities. These three theories do not exist in isolation, but form a closed-loop driving mechanism through the progressive synergy of "symbolic attraction-cultural identity-industrial realization": the attention economy lays the foundation for brand attraction, the transformation of cultural capital strengthens audience adhesion and emotional connection, and the upgrading of the value chain is realized through scenario innovation. Value chain upgrading realizes multi-dimensional realization of brand value through scene innovation. The combined effect of the three highlights the cultural rootedness and market extensibility of the IP of Yangling Agricultural Science City, and also provides theoretical support and practical path for its leap from "Agricultural Silicon Valley" to "International Agricultural Science Innovation Highland".

3.4 Design of an urban identity system (Figure 3)

Yangling Agricultural City Concept Recognition and Design[19]. The concept of Yangling City can be shown through mainstream slogans and slogans. The current slogan "One glance at Yangling, a thousand years of farming" reflects the history and tradition of agriculture. In order to reflect the pursuit of modernization and innovation in Chinese agriculture, the slogan can be expanded to "A Thousand Years of Farming and Studying, Creating the Future with Wisdom". The image design needs to incorporate the agricultural history and innovative spirit of the city, creating a long-lasting, innovative and modernized image of the city's tourism.

Yangling Agricultural Science City through behavioral identity and design[19]. The district government takes the lead in image construction, and agribusinesses show the characteristics of Yangling through product promotion. The research team will explore diversified forms of publicity, such as short films and animations, to enhance the diversity and social influence of the city's image communication, and emphasize the synergistic communication effect between enterprises and the public[20]. Ultimately, it is proposed to strengthen supervision, optimize communication strategies, understand the needs of local residents and tourists, and establish a tourism feedback mechanism to ensure the sustainable and healthy development of the city's image and communication.

Visual Identity and Design of Yangling Agricultural Science City[19]. The visual image of a city refers to the external image of a city shaped by a series of visual symbols and material factors in the process of conveying its spiritual concepts, cultural connotations and values. These symbols and factors include, but are not limited to, tangible material elements such as the city's typical buildings, main colors, architectural styles, geographical features, famous landscapes and so on.

Yangling Agricultural Science City Specialty Product Identification and Design[21]. Characteristic product identification is an important carrier for the transformation of city brand value, and it is necessary to transform agricultural culture into perceptible and consumable physical products through the path of "cultural gene refinement-symbol translation-scene empowerment". Yangling builds a composite product system of "science and technology-enabled agricultural products + culture-immersive cultural creation" around the

two main lines of "Agricultural Fair Products" and "Yangma Cultural Creation", and integrates digital technology to Enhance the experience value.

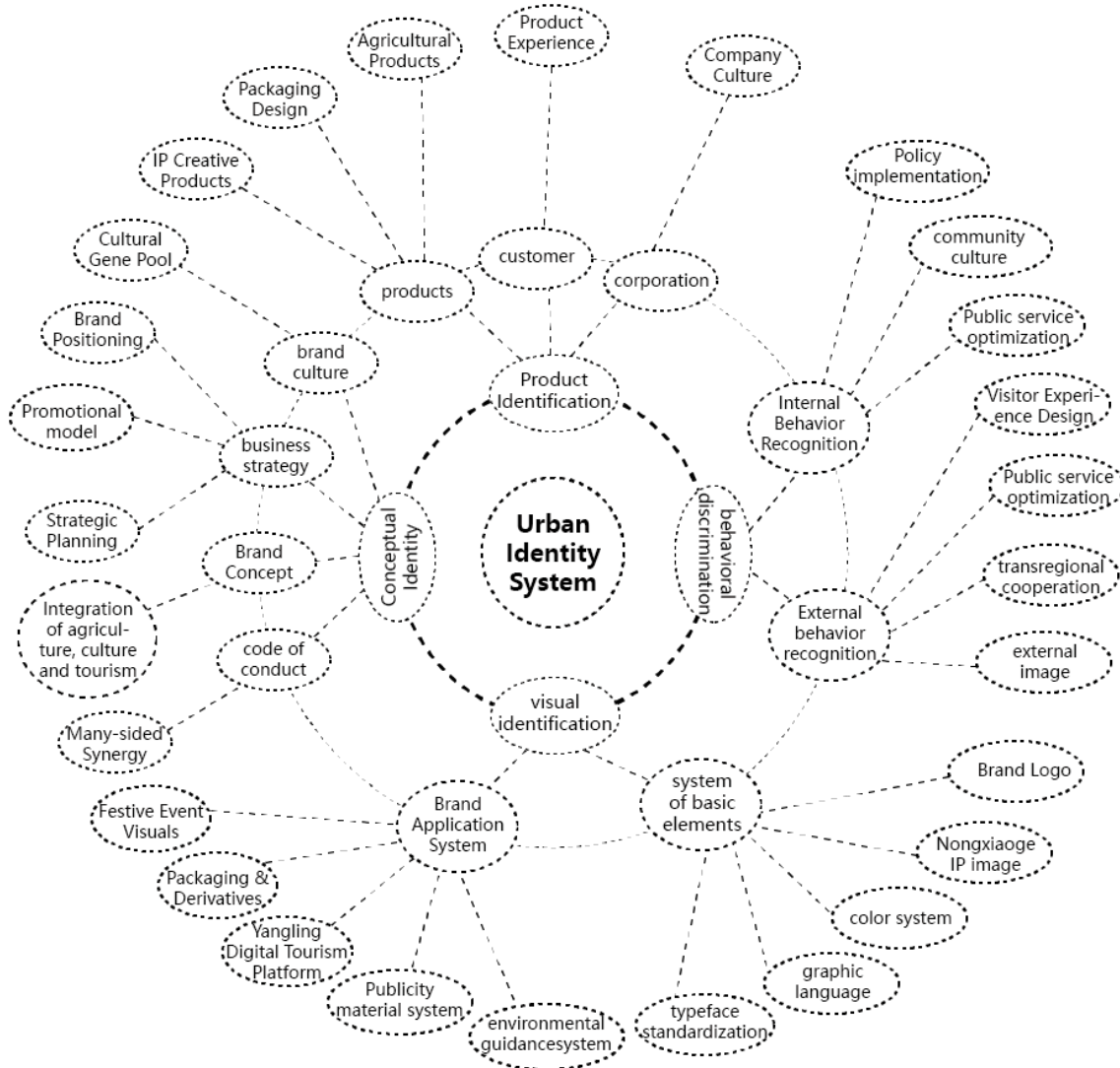


Figure 3: Network diagram of the urban identity system

4 Sustainable design for urban identity

The construction of urban image is not a quick fix, but requires systematic maintenance and continuous updating to adapt to the development of the times. Based on this, this paper proposes a whole-process closed-loop approach to image sustainability design. The sustainable design of agricultural, cultural and urban image requires a closed-loop process from insight, definition, planning, design, publicity, feedback to insight, and so on, so that the image design of Yangling Agricultural Science and Technology City can "turn up" (Figure 4), and realize a more accurate, vivid and powerful image design. The healthy development of the tourism industry and the sustainable enhancement of the city's image can be realized through the cooperation and synergy of all aspects of society, brand innovation and creativity, as well as brand building and other key factors[22].



Figure 4: Flow chart of Yangling's urban image ecosystem

This approach not only focuses on the initial planning and implementation of image design, but also emphasizes the continuous monitoring and feedback of the design effect to ensure that the image design can keep up with the trend of the times and meet the changing needs of the public. In the insight stage, it is necessary to understand the preferences of the target audience, market demand and the dynamics of competitors in order to provide data support for image design. In the definition phase, the core values of the city image should be clarified and the design direction should be established. The planning and design phase combines agricultural, cultural and tourism elements to create a city image with Yangling's characteristics. The publicity phase utilizes diversified media channels to widely disseminate the city image and enhance its visibility and reputation. The feedback phase collects public opinions and evaluates the effectiveness of the design in order to provide directions for the next round of image design, thus strengthening the application of innovations to promote the sustainable development of tourism[23].

5 Yangling Brand Image Concrete Practice

5.1 Brand Image Positioning

In the contemporary urban context, the design of IP images must adhere to the "5C principles" of culture, contrast, continuity, commerce, and capital to facilitate a synergistic transformation of "image symbol, cultural identity, and industrial value-added.[24]" The synergistic transformation of "Image Symbol-Cultural Identity-Industrial Value-added" is imperative for the advancement of contemporary urban IP image design. The brand positioning is anchored in Yangling's rich agricultural heritage and contemporary agricultural advancements, with a core emphasis on the dual themes of "agriculture" and "future." The brand's overarching vision is to position Yangling as a place where one can "glance and see a thousand years of farming." The brand's positioning is predicated on the concept of Yangling's historical and scientific legacy, with the aim of transitioning the city from its current role as the "Silicon Valley of Agriculture" to a more prominent position as the "Highland of International Agricultural Innovation."

5.2 Yangling Agricultural Culture Connotation and Element Extraction

Cultural Connotation: As symbols with symbolic meaning, imagery characteristics, and highly refined symbolism, the Yangling Agricultural Element constitutes a unique cultural identity for the Yangling region, one that is widely disseminated and profoundly entrenched in the populace's consciousness[25]. It embodies a profound traditional cultural heritage, while

concurrently reflecting the exceptional achievements of contemporary Yangling agriculture. Any element that manifests these external characteristics is recognized as a component of the "Agricultural Cultural Element." (Table 1)

Table 1: The 10 Core Elements of Yangling Culture

Cultural elements	Imagery	Brief statement
Houji Farming Culture		Yangling is considered one of the cradles of Chinese agricultural civilization. According to historical records, Houji is believed to have transmitted agricultural knowledge to the local populace, particularly techniques related to harvesting. The Houji Crop Garden and the Farming Culture Inheritance Ceremony perpetuate this tradition, underscoring the foundations of agricultural civilization and augmenting the cultural heritage of the brand.
Modern Agricultural High-tech Industrial Demonstration Zone		China's only national agricultural demonstration zone, integrating agricultural research, education and industry, represents the highland of modern agricultural science and technology and innovation, giving the brand vitality and power.
Tajikistan Ruins		Located in Yangling District, the ruins of Ancient Tai State, the place where Houji was sealed, witnessed the development of farming culture in the early Zhou Dynasty, and has important archaeological and historical value, adding to the historical flavor of the brand.
Garden of Teaching and Learning		The open park with the theme of farming history shows scenes of Houji teaching crops and ancient farming tools through sculptures and inscriptions, which is a visualization carrier of Yangling's agricultural culture.
China Yangling Agricultural Hi-Tech Fair		State-level Agricultural Hi-Tech Expo, which is held annually in Yangling, gathers global agricultural scientific and technological achievements, and becomes an international window for agricultural science and technology exchanges and achievement transformation.
Yangling Weihe Wetland Ecological Park		Weihe River, the largest tributary of the Yellow River, flows through Yangling District, nourishes the farming culture of Guanzhong Plain, is the symbol of local irrigated agriculture and ecological civilization, carries the memories of the life of the residents along the coast, and enriches the brand image.
Wheat culture		Yangling is one of the birthplaces of Chinese agriculture, with a long history of dry farming represented by wheat, symbolizing the roots of its farming civilization. As a modern agricultural research base, Yangling has made outstanding contributions in the field of wheat breeding and high-yield technology, laying the foundation of the brand.
Sui emperor's mausoleum in Sui dynasty (541-604)		The mausoleum of Yang Jian, the Emperor of Sui, is located in Yangling District, which is a national-level cultural relics protection unit. Yangling District is named after the Tomb of Tai, which adds strength and historical depth to Yangling's brand-shaped strip.
Yangling Marathon Gong Show		Combining traditional gongs and drums with modern sports events, it becomes a window to showcase regional culture, highlighting the fusion of vitality and heritage, and increasing the vitality of the brand.
Gyeongsan-gung palace ruins		The site of the birthplace of Tang Taizong Li Shimin, an important remnant of Tang Dynasty history and culture, enriches the historical layering of Yangling District's brand.
Yangling dipping noodles in water		The representative of local special food culture attracts tourists with its unique production process and flavor, becoming a symbol of Yangling cuisine and expanding the scope of the brand.

Elemental Extraction:

Born out of agriculture and prospered by agriculture. Relying on strong agricultural research, Yangling has made remarkable achievements in wheat research and bred high-yielding and high-quality wheat varieties. These varieties have not only been widely planted locally, but have also been promoted both at home and abroad, significantly improving wheat yield and quality and contributing to global food security. For example, "Xiaoyan No. 6" has become an important breeding material, and Yangling varieties have dominated the four varietal updates in the Huanghuai wheat region since the founding of China. Therefore, the design of Yangling's urban image should incorporate wheat elements.

The source of life, the shores of the Weiwei River. Yangling is located on the Wei River, which is also the primary source of water for agricultural activities in the region. The Wei River has been a witness to the historical changes and cultural development of Yangling. Legends and folklore have been transmitted across the river's shores, reflecting the rich cultural heritage of the region. The river has played a pivotal role in the development of Yangling's agricultural civilization, which has significantly contributed to the city's cultural tapestry. In light of this rich historical and cultural heritage, it is imperative to incorporate the element of water, symbolized by the Weihe River, into the design of Yangling city's image, thereby ensuring the preservation and enhancement of its unique cultural identity and regional character[26].

The hometown of Houji, the new city of agricultural science. Field ridges, farming tools and farming customs embody the spirit of Houji farming and have become the cultural heritage of Yangling, witnessing the development of China's agricultural civilization. As a national agricultural high-tech industrial demonstration zone and a demonstration base for agricultural technology exchange and training of the Shanghai Cooperation Organization, Yangling carries a new historical mission. In the future, Yangling will be closely related to agricultural development and needs to build a color system that can show regional cultural characteristics and enhance the visual impression of the city[27].

5.3 City Signage Design Based on Yangling Agricultural Culture and Elements

Brand Identity Design for Yangling Agricultural Science City:(Figure 5)



Figure 5: Yangling Agricultural Science City logo design

The logo's design incorporates elements of its own attributes and regionality, resulting in an internationalized design that incorporates Chinese elements[28]. This design combines modern design concepts, thereby achieving recognition on an international scale. First, the implantation of traditional farming culture. The traditional Chinese colors of "Pine Blossom" and "Green Charm" are used as the basic colors of the logo, with "Pine Blossom Yellow" representing the history of wheat cultivation in Yangling, and "Green Charm Green" represents the basic color of agriculture. The second is the combination of Yangling's

development orientation. Yangling is the first agricultural high-tech industrial demonstration zone in China, and also the "One Belt, One Road" Modern Agriculture International Cooperation Center. In the logo, two lines are intersected in the center, forming the shape of wheat ears, which implies the development positioning of Yangling as the "Belt and Road" Modern Agriculture International Cooperation Center, and the two lines are intersected to focus on Yangling. Thirdly, it is the integration of Yangling's strategic position in agriculture. The yellow and green colors in the logo indicate that Yangling is committed to building a silicon valley for the seed industry in the dry zone, while the yellow color on the upper left and the green color on the lower right of the logo represent the dry zone agriculture in the northwest of China and the paddy field agriculture in the southeast. Fourthly, it is the expression of Yangling's future agricultural construction. Yangling's future agriculture cannot be separated from the development of science and technology, and Yangling's agricultural highland - Northwest Agriculture and Forestry University is building the Future Agricultural Research Institute, based on this, the logo's design is very futuristic and scientific and technological sense, the shape of the center is not only an ear of wheat, but also a seed, a helix on the DNA, which means that Yangling's future is full of infinite possibilities, It symbolizes that Yangling's future is full of unlimited possibilities and will be prosperous.

Combining the above four points organically, a regional logo with the characteristics of Yangling's agricultural science and a sense of the future is finally formed, through which the logo can better publicize Yangling, China, and through which the image of Yangling, China, can be effectively promoted, and the city's cohesion can be strengthened to a certain extent, which will in turn enhance the level of local productivity, attract external talents and business investment, and promote the sustainable development of the city's economy[29].

Visual Identity System Design for Yangling Agricultural Science City:

The design of visual identification system includes the basic part and application part. The basic part regulates the standard color of the brand logo (Fig. 6), the standard color scale (Fig. 7), the auxiliary graphic (Fig. 8), the standard fonts, and the combination of the logo, etc. Among them, the auxiliary graphic of the logo extracts the basic shape of wheat ears and extends the design, which has good applicability. Among them, the auxiliary graphic of the logo extracts the basic shape of wheat ears to extend the design, which has good applicability, and the colors of the logo are mainly green and orange. In the application part, the design is mainly combined with the product packaging, city website, advertisement, etc., and the design manual of the enterprise's visual identification system is produced[28].



Figure 6: "Yangling Agricultural Science and Technology City" Brand Standard Colors



Figure 7: Standard color scale of "Yangling Agricultural Science City"



Figure 8: "Yangling Agricultural Science City" Auxiliary Underline

5.4 Blind Box and Packaging Design Based on Yangling Agricultural Culture and Elements

Packaging as a silent salesman, through the graphics, text, color and other elements of the comprehensive arrangement of the design, show the brand characteristics, convey the product information and characteristics. Packaging design with regional characteristics can strengthen the uniqueness of the product [28]. Combined with the brand positioning strategy, the "Mystery Agricultural Science City" gift box packaging was designed (Figure 9). Inheriting the brand's modern and simple design style, the brand logo and colors are used appropriately, and the packaging graphic design is based on Yangling landmarks such as the Yangling Grand Theatre and the main body of the International Convention and Exhibition Center, and hand-drawn illustration techniques are used for performance (Figure 10).



Figure 9: Gift box design of "Yangling Agricultural Science City".



Figure 10: Mouse drawing of landmarks in "Yangling Agricultural Science City"

5.5 "Super Image" Design Based on Yangling Agricultural Culture and Elements

Aiming at the current situation and problems of Yangling city IP image design, through in-depth analysis of the positioning of Yangling city image and regional cultural characteristics, and closely integrating with the needs of Yangling city image IP audience, we established the mascot design strategy of Yangling city image[30]: the design positioning focuses on highlighting the "Yangling in Agriculture", and focuses on retaining the existing visual identity features of Yangling - "pigeon" and "wheat", and naming it as the "mascot" of the city. The design focuses on "Yangling of Agricultural Science", and retains Yangling's existing visual identity features - "pigeon" and "ears of wheat", and named as "Nong Xiao Ge"(Figure 11),"Nong Ge"Chinese harmonic"Nong Ke",Thus maintaining the continuity of the city's brand.



Figure 11: Three views of "Nong Xiao Ge".

The design is in line with "Yangling Agriculture". The mascot "Nong Xiao Ge" shows the charm of Yangling's agriculture by taking the culture of agriculture and science as the core and combining it with the characteristics of Yangling. The mascot "Nong Xiao Ge" combines modern cartoon elements to symbolize peace and hope, and the role of Yangling as a bridge in the exchange of agricultural technology. The shape of "Head in the shape of a wheat ear" symbolizes Yangling's agricultural civilization and strengthens the agricultural characteristics. The overall design demonstrates Yangling's status as a national agricultural demonstration area and its mission to build a silicon valley for the seed industry in the dry zone.

Elemental extraction shows the "future of agriculture".The overall shape of "Nong Xiao Ge" embodies the harmonious symbiosis between technology and nature, integrating traditional farming elements with modern technology through modern design techniques. In terms of color selection, green, which represents vitality and hope, and yellow, which symbolizes harvest and warmth, are used to create a positive and energetic visual effect. At the same time, the derivative design of "Nong Xiao Ge" is interactive and can express a wealth of emotions through different movements and facial expressions, enhancing the emotional connection with the audience[30], and thus better conveying the city image and cultural connotation of Yangling.

Styling design emphasizes "lively and cute". The design of "Nong Xiao Ge" emphasizes

the lively and lovely quality, adopting rounded lines and big eyes to give it a friendly appearance. It also incorporates rich expressions and movements, such as smiling and waving, to make the IP image more vivid and interesting, to bring it closer to the audience, to enhance the sense of goodwill and identity, and to strengthen the memory of the city's image.



Figure 12: Yangling Agricultural Science and Technology City "Nong Xiao Ge" IP image and emoticon design



Figure 13: Yangling Agricultural Science and Technology City "Nong Xiao Ge" IP application design

Through the above methods, "Nong Xiao Ge" IP image not only becomes the visualization carrier of Yangling's agricultural culture, but also builds a super symbol with both cultural depth and market attraction through the fusion design of "tradition-future" and the balanced expression of "cute-professional", injecting sustainable life into Yangling's city brand. Through the fusion of "traditional-future" design and the balanced expression of "cute-professional", it builds up a super symbol with both cultural depth and market attraction, and injects sustained vitality into Yangling's city brand.

5.6 City image publicity and promotion

The establishment of the city's tourism image necessitates the implementation of a comprehensive publicity strategy, encompassing a variety of promotional channels[25]. These channels may include traditional media such as television and print media, as well as contemporary digital media platforms, including social networks and other online forums. The objective of this strategy is to disseminate information regarding the city's tourism offerings to a broad audience, thereby fostering awareness and interest in its tourism sector.

Media publicity. Paper media are mostly publicized in business cards (Fig. 14), newspapers, paper posters (Fig. 15), etc., while online media are to be publicized from the

way of multi-dimensional media such as the Internet, TV and new media. In media advertisement, TV advertisement is to produce exquisite promotional films to be placed in local and influential TV stations, such as Shandong TV broadcasting Qingdao image advertisement. Online advertising utilizes search engines and social media ads, which are accurately delivered according to the user's search keywords or interests and geographic location. Mobile advertising utilizes mobile apps to showcase the city's tourism resources, shopping and food advantages in tourism or local life service apps to enhance users' awareness of the city's image

Major event promotion. Major events often attract a lot of attention globally or regionally, providing an excellent opportunity to publicize and promote the city's image[31]. Take the China Yangling Agricultural Hi-Tech Fair as an example, during each China Yangling Agricultural Hi-Tech Fair, by displaying the latest agricultural research achievements, agricultural modernization demonstration parks, and special agricultural products, we can convey to domestic and foreign agricultural experts, enterprise representatives, and media journalists the outstanding achievements and leading position of Yangling in the fields of agricultural science and technology research and development, upgrading of the agricultural industry, and cultivation of agricultural talents, thus shaping the city's image as a leader in agricultural science and technology. The exhibition will convey Yangling's outstanding achievements and leading position in agricultural science and technology research and development, agricultural industry upgrading, and agricultural talent cultivation to the participants, thus shaping Yangling's image as a highland of agricultural science and technology innovation.



Figure 14: Media campaign design



Figure 15: Poster design for city image promotion

6 Summarize

This study takes the integration of agriculture, culture and tourism as the background and Yangling, Shaanxi as the practice sample, and through the construction of the "three-chain synergy" mechanism and the "1+3+5" branding system, as well as the creation of a sustainable city brand, it is conducive to the realization of the innovative transformation of agricultural and cultural resources and the systematic enhancement of the value of the city's brand. It is conducive to the innovative transformation of agricultural cultural resources and the systematic enhancement of city brand value. Practice has shown that the IP image of "Nong Xiao Ge" and its derivative applications can effectively enhance the recognition and dissemination of Yangling, and promote the in-depth integration of the agricultural, cultural and tourism industries. However, there are still limitations in this study, such as insufficient cross-regional case comparisons and long-term operational effects to be verified. In the future, we can further explore the application of digital technology in brand communication and strengthen the research on multi-subject collaboration mechanism, so as to provide a more universal reference path for the transformation and upgrading of agricultural cities and the sustainable development of city brands.

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