



An Integrated Approach to Sustainable Agriculture and Rural Regeneration in China's Yellow River Golden Triangle

Executive Summary

Hong Kong & China | August 2017

GLOBAL LEADERS PROGRAMME

Introduction



The Global Institute For Tomorrow (GIFT) is an independent Hong Kong-based think tank and executive education provider focused on advancing a deeper understanding of global issues.

The Global Leaders Programme (GLP) is GIFT's internationally-recognised two-week executive education programme rooted in Asia which combines intellectual rigour, a beyond-classroom methodology and an output-driven approach to leadership development.

A cohort of 22 participants from 12 companies and organisations representing 8 countries joined the 53rd GLP in Hong Kong and Shanxi, China, in August 2017.

In partnership with **Puhan Cooperative**, a prominent multifunctional cooperative in Yongji, Shanxi and **Shijie Agricultural Technology Co.**, a pioneer in natural farming technology, participants produced a business plan to create an inclusive food system that supports **rural regeneration and poverty alleviation**, expected to benefit the 11 million smallholder farmers in the **Yellow River Golden Triangle region**.

Through field-research, stakeholder interviews and site visits, participants gained deeper insights into rural China and the agricultural sector as well as the opportunities for rural regeneration and poverty alleviation amidst mounting environmental degradation and food safety concerns.

The following pages are an **Executive Summary** of the business plan. More detailed analysis can be found in the full report which is available upon request.

For more information on the Global Leaders Programme,
please contact us at enquiry@global-inst.com

Sustainable Agriculture and Rural Regeneration

China's 230 million smallholder farmers form the backbone of the rural economy. Yet despite the significant investments made in the agricultural sector, they remain marginalised in terms of economic and social development. The excessive use of chemical inputs has exhausted the land and compromised its fertility and productivity. Coupled with steep competition in the market for food, smallholder farmers find themselves in a debilitating cycle of poverty.

As China aspires to become a moderately prosperous society and eradicate poverty by 2020, it is imperative that the country develop **an inclusive and sustainable food production system** in order to promote economic development for smallholder farmers and rural communities.

Insights from the **Puhan farming cooperative** in Yongji, Shanxi have inspired a new model in which multifunctional cooperatives can play a crucial role in rural regeneration, linking the well-being of smallholder farmers with the growing demand for green and healthy food. The majority of cooperatives however are underdeveloped and require additional support to expand their services and develop a full farm-to-table value chain.

The Yellow River Golden Triangle (YRGT) consists of parts of Shanxi, Shaanxi and Henan provinces on both sides of the Yellow River, namely the prefecture-level cities of Yuncheng, Linfen, Weinan and Sanmenxia. Leveraging strong national support for building the YRGT region into a regional economic engine, this proposal describes **an integrated approach** involving the participation of city governments, investors, multifunctional cooperatives, enterprises and civil society organisations.

Project Partners

Puhan Cooperative

Established by Ms. Zheng Bing (郑冰女士) in 1998, Puhan Cooperative (蒲韩乡村联合社 “Puhan”) is a community-organised multifunctional cooperative covering Puzhou and Hanyang townships (蒲州镇及韩阳镇) in Yongji, Shanxi (山西省永济市). Over the years, it has developed into an integrated platform serving multifaceted community needs to achieve sustainable agricultural production, community well-being and ecological balance.

Puhan has a membership base of 3,865 rural households accounting for 58% of the population in the area who cultivate a total of 80,000 mu (5,333ha) of farmland.

Shijie Agricultural Technology Development Company

Shijie Agricultural Technology Development Co. (吉林世杰农牧技术有限公司 “Shijie”) was co-founded by Ms. Li Yunfeng (李云凤女士) and Mr. Li Shijie (李仕杰先生) in 2009. Shijie promotes natural farming and a system of circular farming which results in organic meat, vegetables and grains far exceeding the quality of industrialised agricultural produce.

The zero-waste “Fermentation Bed” technology is its core technology for sustainable livestock farming. Shijie had trained over 300 producers and cooperatives in the past 10 years.

Insights from Puhan Cooperative

- Starting as a farming supplies store in 1998, Puhan developed into a service oriented multifunctional cooperative under the leadership of Ms. Zheng Bing, with a strong focus on rural regeneration to create livable villages. It achieved a total revenue of RMB 80 million (USD 11.8 million) and a net profit of RMB 2 million (USD 294,000) in 2016 from the following key revenue streams: group sales, group purchasing and microfinance.
- Puhan developed its services by addressing the needs in the community. Often these needs are overlooked by cooperatives and agri-businesses driven solely by economic interests. Most of the services developed by Puhan, including public services, are revenue generating and self-sustaining. Initial capital came from mutual credit or Puhan’s community fund.



Puhan Cooperative’s Multifunctional Services

Public Services	Ecological Farming Services	Financial Services	Rural-Urban Integration
<ul style="list-style-type: none"> Elderly Care Children Education Handicrafts Women Education Cultural Activities Waste Management Healthcare 	<ul style="list-style-type: none"> Technical Education Technical Advisory Crop Protection Mechanized Farming Group Purchasing of Agricultural Inputs and household products Consolidated Sales of Agricultural Produce 	<ul style="list-style-type: none"> Micro-credit to support Agricultural Production and Household Needs Community Fund to support Public Services 	<ul style="list-style-type: none"> Sales and Distribution Urban Consumer Stores in Yongji and Yuncheng Farm Visits for Urban Consumers Participative Guarantee System (PGS)

Public Services



Puhan places quality of life and community-wellbeing at the forefront of its activity and mission. It operates elderly centres, kindergartens, youth organic farms, artisan workshops, music studios and guest houses in each of the twelve districts. Public services enrich the daily life of villagers and bring the community together. A cohesive and mutually supportive community can enhance agricultural and economic development.

Sustainable Farming

Puhan promotes product diversification, intensive smallholder production and sustainable farming. The cooperative achieves economies of scale by offering services to support production.

Puhan started its organic conversion in 2006 and worked with Shijie in 2016 to introduce “Fermentation Bed” technology for livestock to scale up circular farming among smallholder farmers.

Going forward Puhan plans to introduce the technology to 600 households, most of whom are elderly farmers between the ages of 55 and 70. The cooperative will provide farmers with microfinance and mechanised farming support. Part of the model’s profit will go towards a retirement saving plan.



The Yellow River Golden Triangle (YRTG)

- The YRGT covers an area of 57,800 square kilometers with a population of 17.21 million, 68% of whom are smallholder farmers. The four cities combined achieved a total GDP of RMB 506 billion in 2015.
- China aims to develop the YRGT into a **new regional economic engine** to act as an example of integrated, “leapfrog development” in an underdeveloped region.
- The government has called for **joint effort** in protecting ecological systems, promoting circular low-carbon development, improving resource utilization and providing basic public services.



This important region of central China is also known as the cradle of Chinese civilization with invaluable knowledge which has shaped traditional sustainable agricultural practices in China.

Key Learning from Puhan for the YRGT Region

Key success factors from Puhan Cooperative can be applied to other cooperatives in the YRGT region. These include the following:

- **Community organisation** is fundamental to bring out the intrinsic values of rural communities and restore rural vibrancy.
- Cooperation among smallholder farmers goes beyond agricultural production. Mutual support in daily living and the delivery of **public services** goes a long way in building community cohesion which in turn enhances cooperation in agricultural production.
- Gaining understanding and approval from village committees and villagers is necessary to develop village-level services that **fulfill local needs**.
- **Community organisers** play a meaningful role in accompanying smallholder farmers in their endeavour to address their needs. They collect first hand information to help the cooperative understand service demands and minimise the risks associated with microfinance.
- **Education and talent development** are crucial to grow and retain talent in rural areas.
- **Technical training** and the organisation of learning circles are fundamental to lead the transition to sustainable farming and build a robust farming sector.
- Smallholder production can achieve economies of scale by **supporting services** such as **microcredit, group purchasing, group sales** and **mechanised farming**.
- A complete **farm-to-table value chain** helps retain profits across the value chain, and is central to building an inclusive food system that supports rural regeneration.

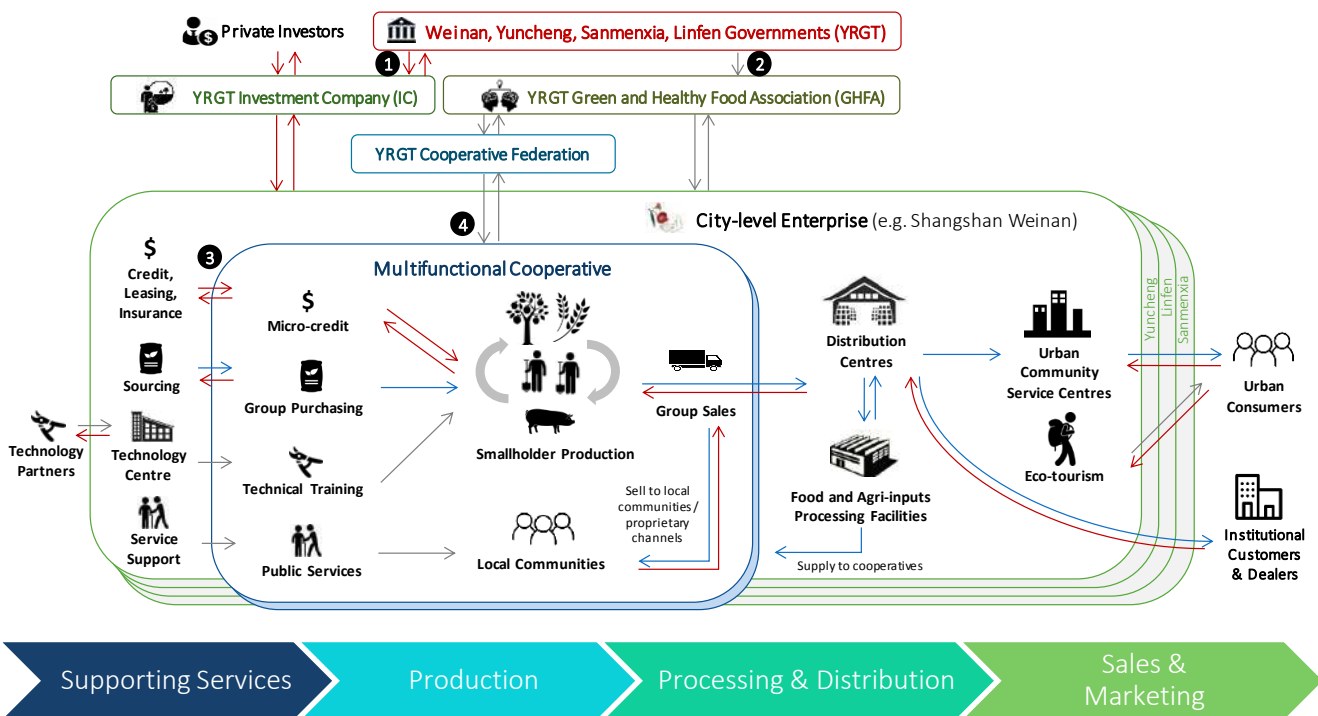


Rural Regeneration: Business Model

Inspired by the Puhan cooperative model, the proposed model for an inclusive food system involving farmers' cooperatives supports rural regeneration efforts in the region. It seeks to connect the well-being of smallholder farmers with the increased demand for green and healthy food among urban consumers.

The proposal involves the creation of:

- **The YRGT Investment Company** to raise and manage an investment fund focused on rural regeneration via an innovative agricultural platform involving cooperatives,
- **Four City-level Enterprises** with operational and managerial expertise to provide professional services to support cooperatives along the value chain, and
- **The YRGT Green and Healthy Food Association** to award the "YRTG Green and Healthy Food" seal, establish city-level Regional Technology Centres and oversee rural regeneration efforts.



1 The YRGT IC is established with initial funding from the city governments as co-investors to invest in four city level enterprises to strengthen the value chain and support cooperatives. Private investors can participate as co-investors.









2 The YRGT GHFA is a multi-stakeholder industry association in YRGT responsible for awarding the "YRTG Green and Healthy Food" seal. The seal requires meeting standards for farming systems, social development and environmental sustainability. A **Participatory Guarantee System (PGS)**, a low-cost alternative and complementary tool to third-party organic certification, will be adopted as the quality assurance system.

3 **City-level Enterprises** provide supporting services to cooperatives to create a full farm-to-table value chain, filling the gap in the market where smaller cooperatives have not yet been able to reach. It is proposed that the City-level enterprises be named **Shangshan**. It is proposed that 60% of shares will be offered to the cooperatives and by extension to individual farmers, relative to their land size and total transaction value, by means of "sweat equity".

4 **Multifunctional cooperatives** organise and support smallholder farmers in sustainable farming and living and form a federation at YRGT level to represent themselves on the board of YRGT IC, YRGT GHFA and City-level Enterprises.

Key Value Chain Services

The following key services are delivered by the **Shangshan Enterprise** to strengthen the value chain and support cooperatives:

<p> Credit</p> <ul style="list-style-type: none"> • Provide wholesale credit to cooperatives to support microfinance. • Provide funding to incubate new techniques such as Circular Farming, as well as machine leasing. • Enable participating farmers to save into a retirement fund. 	<p> Distribution Centres</p> <ul style="list-style-type: none"> • Operate wholly-owned or joint venture distribution centres to provide logistical support, including cold chain for the distribution of product and build a wider market to sell agricultural products. Cooperatives can choose to sell all or a selection of their products through Shangshan Enterprise.
<p> Sourcing</p> <ul style="list-style-type: none"> • Handle the sourcing of farming inputs and household items (such as consumer products) to negotiate lower prices for bulk orders and provide a system to support cooperatives with group purchasing. 	<p> Processing Facilities</p> <ul style="list-style-type: none"> • Extend the enterprise value chain by entering into the processing business supported by investment from the YRGT Investment Co, and joint venture with other food processing companies.
<p> Technology Centre</p> <ul style="list-style-type: none"> • Operate the Regional Technology Centre to provide systematic education for farmers along with technical support on the field. 	<p> Urban Community Service Centres</p> <ul style="list-style-type: none"> • Operate Urban Community Service Centres (UCSC) to develop urban consumer networks. Take orders from urban members and organise regular product delivery. Organise workshops for urban consumers to improve urban-rural interaction and deepen their understanding of green and health food.
<p> Service Support</p> <ul style="list-style-type: none"> • Distribute 20% of its profit to local community development. Support cooperatives to develop social services including children education, elderly care and culture preservation to improve the quality of life of rural areas, create jobs and attract talent. Subsidise cooperatives staff's salary at initial stage to develop professional staff. 	<p> Eco-tourism</p> <ul style="list-style-type: none"> • Work with cooperatives to develop eco-tourism activities for urban consumers to experience rural life and meet producers. This aims to nurture a deeper understanding of how food is produced, as part of the PGS quality assurance process.

Branding: Shangshan

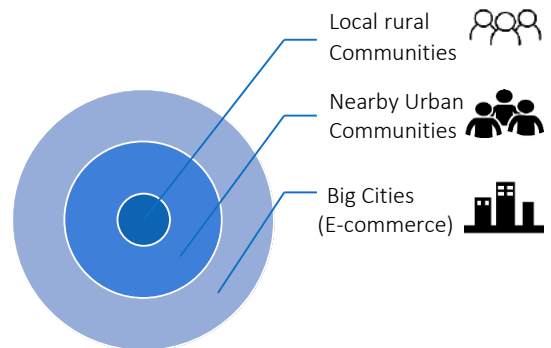


(Chinese Brand) (Food Segmentation)

A new brand – **Shangshan** – is proposed for the City-level Enterprise. It is designed to highlight the economic, social and environmental value of the enterprises and their mission.

The Chinese characters mean "a place where the food is of superb quality and produced ethically".

Target Market



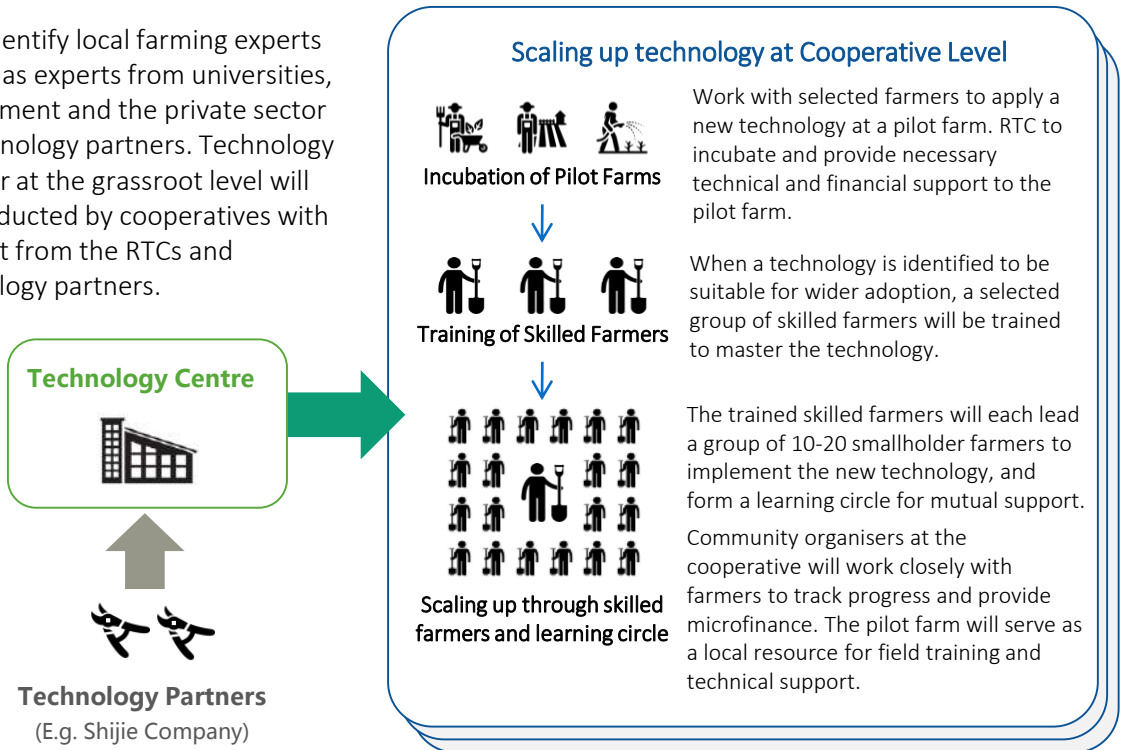
The YRGT region has a population of 17 million people. The primary market for certified YRGT Green and Healthy Food will be the local markets in the YRGT region.

Consumers in larger cities are supplementary markets and could eventually be reached through an e-commerce platform.

Regional Technology Centre: Knowledge Transfer

Sustainable farming technology is essential to restore the environment, produce healthy food and give smallholders a competitive edge. A shortage of facilities, of training resources and capital hinder the expansion of sustainable farming techniques. Regional Technology Centres (RTC) will be established by the YRGT Green and Healthy Food Association and operated by each Shangshan Enterprise to promote the adoption of sustainable farming technology.

RTCs identify local farming experts as well as experts from universities, government and the private sector as technology partners. Technology transfer at the grassroots level will be conducted by cooperatives with support from the RTCs and technology partners.



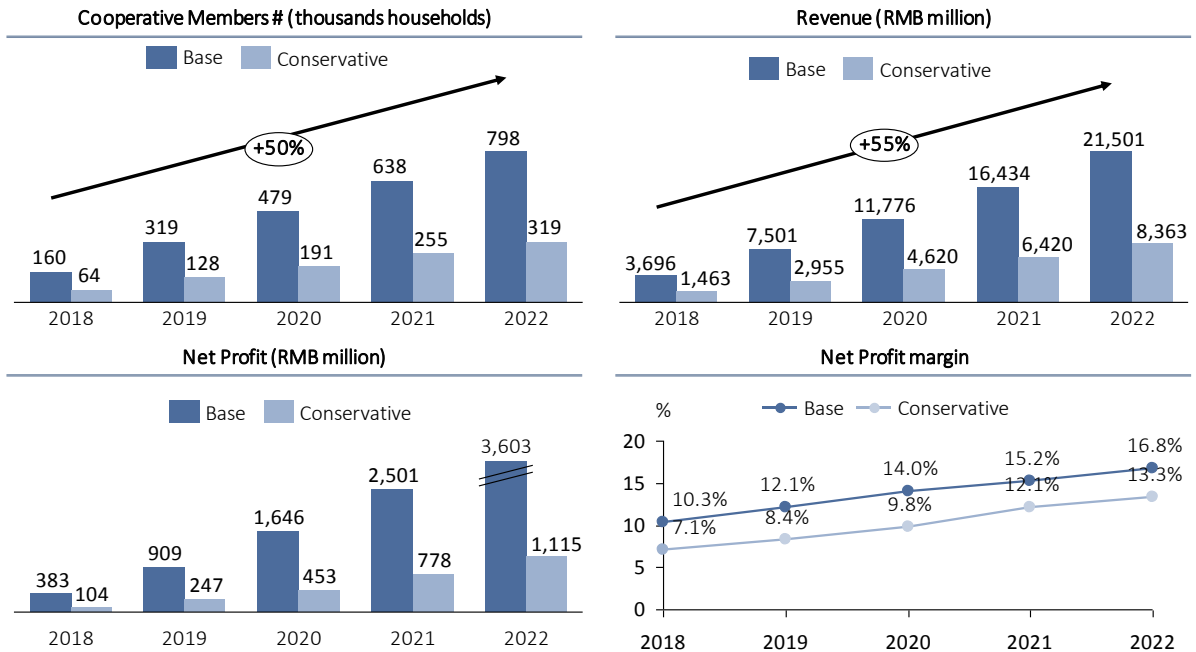
Public Services & Social Impact

Inspired by Puhan Cooperative, the public services proposed in the business plan focus on improving quality of life, community building, and rural revitalization.

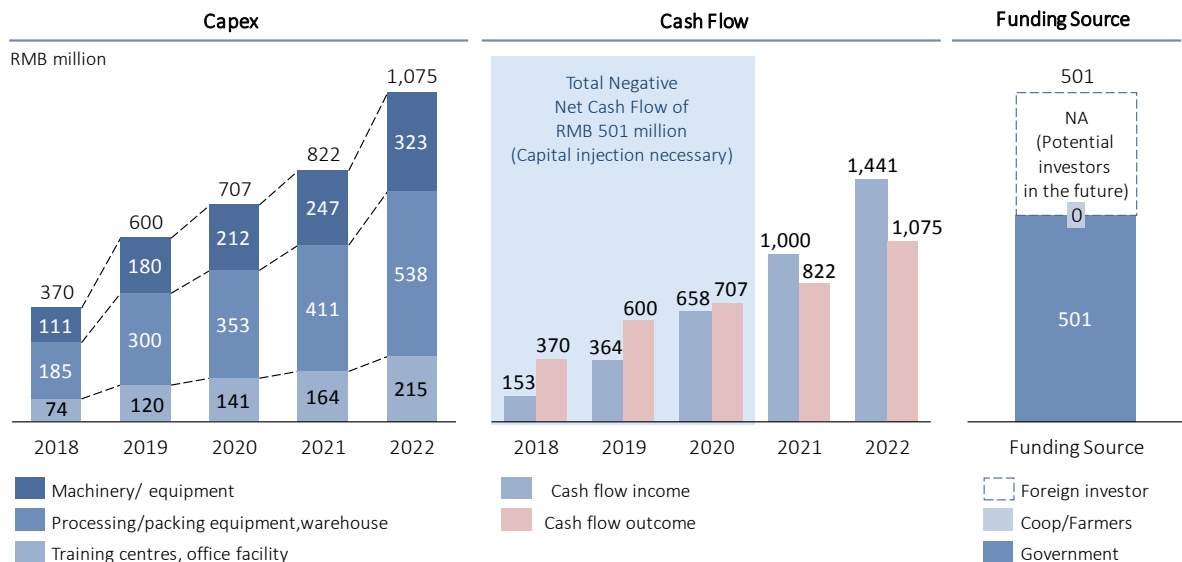


Financial Analysis and Investment

After five years, at a scale serving 2.75 million farmers in the YRGT Region (25% of 11 million total), all four City-level Shangshan Enterprises are projected to collectively generate a **revenue of RMB 21.5 billion (USD 3.3 billion) annually**, contributing significantly to the expansion of the local economy. The **net profit is expected to reach RMB 3.6 billion (USD 556 million)**. The commercial viability and continued growth of the Shangshan Enterprises hinge on the expansion of each cooperative's membership base, trust from and active participation among smallholder farmers, and the development of local and urban markets for green and healthy food.



An **initial investment of RMB 500 million (USD 77.3 million)** will be required to cover capital expenditures and expenses in the first 3 years. It is proposed that the investment be led by the government with selected private co-investors.



The Shangshan Enterprises will also significantly improve farmers' income, lifting the rural per capita income in the YRGT above the average national level, promoting the retention of young talent and driving rural regeneration in the region.

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