



Pre-Feasibility Study on Harbin Vocational and Technical College New Park Project

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Executive Summary

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i. Executive Summary

1. Harbin Vocational and Technical College (HVTC) is a higher educational institution in Harbin, Heilongjiang province, China. It currently provides Vocational Education and Training to 10,000 full-time students, and has been recognized as one of China's top 100 vocational colleges. HVTC was established in 2002 through the merger of seven schools.

2. In order to meet expected future demand, and considering that there is almost no spare capacity for additional full-time students at HVTC, the "Harbin municipal 12th five-year plan on Education development" includes the expansion of the Harbin Vocational and Technical College. This will be also an opportunity to further boost the quality of the public education service provided by HVTC, and to improve the overall educational experience. HVTC's expansion project considers the construction of 34 facilities with a total surface of 580,142m², in seven lots of land that are adjacent to HVTC¹. Four of these lots have already been acquired, and the remaining three require the resettlement of some people. Once the new park is built, four schools will move out of the already overcrowded existing facilities into the new park. Also, HVTC will absorb the School of Medicine and Nursing (in need of upgraded facilities and that will benefit from HVTC's approach to education). Thanks to this expansion, HVTC will be able to have over 20,000 full-time students in the mid-term (by the year 2027).

3. HVTC's expansion will take place in three stages:

3.1. First stage: The first stage of the project consists of 8 buildings (92,175 m²). This concerns the facilities that are urgently needed. They will be located in land that has already been acquired (lots 1-4), and it will use traditional procurement.

3.2. Second stage: This stage has 9 buildings (165,000 m²). This concerns all the other developments in lots 1-4 that are not urgent. A PPP arrangement will be used.

3.3. Third stage: The third stage has 9 buildings (140,000 m²). This concerns developments in lots 5-7, which haven't been acquired yet. The procurement strategy has to be decided yet.

4. In addition to the facilities above mentioned there are commercial developments to be developed directly by the private sector (hotel, supermarket, garage...) include 8 buildings (182,967 m²). These facilities will help students to acquire hands-on training, as well as reduce the gap between theory and practice.

5. The new park will be an opportunity, beyond the improvement of the education service, to improve environmental and social quality of HVTC. The new facilities should allow HVTC to obtain a two star certificate of the Green Label System. Also, beyond being a very beneficial project to society, the expansion will allow to reform many aspects of the institution in order to make it more inclusive.

6. The private sector will play a crucial role in the near future, participating in three different ways:

¹ This surface includes 182,967 m² of commercial activities (hotel, supermarket, garage, logistics center, hospital) that will be undertaken by the private sector directly.

Table 1: Buildings to be constructed in the different stages of the project

Stage 1		Stage 2		Stage 3	
Building	Surface (m ²)	Building	Surface (m ²)	Building	Surface (m ²)
Training building for International modern manufacturing technology	15,509	Training base for international welding technology	5,000	Teaching workshop for modern service	8,000
Training Building for teaching workshop of electric engineering	13,224	Teaching workshop for automobiles, machinery and electric engineering	35,000	Teaching workshop for construction engineering	12,000
Teaching building and office building for School of Medicine and Nursing	9,559	Construction Planning Institute	3,000	Training building for automobile repair and quality inspection	12,000
Training building for Nursing of School of Medicine and Nursing	11,222	Training base for Regional industry culture promotion	20,000	Training workshop for automobiles	5,000
Training building for Recovering of School of Medicine and Nursing	13,661	Vocational education teaching workshop	20,000	Stadium	15,000
Lab building for the School of food and biological pharmaceutical engineering	3,000	Students' Dormitory	40,000	Student's Dormitory	40,000
Students' Dormitory	20,000	Dining hall	12,000	Dining hall	8,000
Single-layer workshop type training base	6,000	Building for the electricity and other supplies	10,000	Library	10,000
		Gymnasium	20,000	Underground civil air defense	30,000
TOTAL	92,175	TOTAL	165,000	TOTAL	140,000

- 6.1. Collaborating with the schools through activities that enhance the education service, as HVTC has been doing in the past. These arrangements (for example MOUs) do not involve significant investments from the private sector.
 - 6.2. Investing in the development of commercial activities located in the new park, such as a hotel, a supermarket, a logistics center, a garage and a hospital. These are self-financing activities that could provide some limited revenues to HVTC. The main interest to HVTC however would be that these enterprises would have to agree to provide on-the-job training to HVTC students.
 - 6.3. Investing in the development of educational facilities (classrooms and workshops) and their associated infrastructure (dormitories, gym, canteen...). This would be the PPP arrangement analyzed in this PFS.
7. Entering into a PPP arrangement in order to develop part of the new park extension will, if well executed, create value for money by transferring certain risks to the private sector that it can probably manage better than HVTC, as well as by bringing its efficiency and innovation into the project.
8. After a careful analysis of the main risks present in the project, the best suited PPP arrangement for the new park would transfer design, financing, construction and operation and maintenance of the new facilities to the private partner. In exchange, HVTC would make an availability payment to the private partner (demand risk, or the possibility that in the end there are fewer students than initially thought is kept by HVTC). The education service would still be provided by HVTC directly.
9. A legal analysis of the project will need to be carried out at a later stage, even though there are already a few PPP projects in China that prove how this sort of arrangements can be successfully implemented.
10. The financial analysis has been performed for the PPP project and for HVTC, in order to ensure the sustainability of the project. It considers all the associated costs of the project during its design, construction and operation stage. The overall Capital Expenditure of the park expansion project (excluding financial costs and commercial activities) is 2.7 Billion RMB of 2014. The capital expenditure of the PPP project, after discounting the cost of the facilities that will be developed through traditional procurement and through other arrangements, as well as development in lots 5-7, is 1.2 Billion RMB of 2014. The operating expenditure for the project has been calculated using as the actual costs that HVTC currently has operating its facilities, as a starting point. The estimated availability payment that HVTC will have to pay every year to the private sector entering the PPP arrangement, assuming a 25 year agreement, is summarized in the following table:

Table 2: Availability payment to the SPV depending on the investor's IRR after taxes

<i>Million RMB of 2014</i>	13% IRR	15% IRR
Availability Payment	154	166

11. HVTC’s additional sources of revenues (new students and rents from commercial activities) will not pay for all the obligations that HVTC will acquire with the development of the new park: capital investment in the development of the new facilities, operation and maintenance of these facilities, salaries of new teachers and support staff and availability payment to the private sector. Therefore, the new park is not a self-financing project.

12. The necessary funds to make the project sustainable should come from Harbin Finance Bureau. HFB has already committed 600 Million RMB to the project. Nevertheless, more funds are needed from HFB, which are summarized in the following table:

Table 3: Subsidies from HFB to HVTC during the operational stage of the project, excluding current student subsidies

	HFB contribution to HVTC - excluding student subsidies				
	2018	2019	2020	2025	2035
Contribution from HFB in current Million RMB	141,92	172,94	193,82	223,64	306,60
Contribution from HFB in Million RMB of 2014	121,31	142,14	153,18	145,27	134,55

13. The figures presented in this analysis should be viewed as a maximum, since they have been elaborated considering HVTC’s current levels of expenditure (which can probably be reduced by the private sector) and the revenues generated by commercial activities in the new park have been considered to be very limited. HFB needs to confirm the affordability of the project, and its capacity to assume these expenditures during the life of the contract. The usage of public funds in the project is justified by the cost-benefit analysis that has been performed, which offers a Net Present Value of 1 Billion RMB using a 8% discount rate (in real terms), and 48 Million RMB using a 12% discount rate.

14. The next stages for the project would be to:
- 14.1. confirm the affordability of the project by HFB,
 - 14.2. perform a legal analysis of the new park project and its proposed arrangement as described in this document, and
 - 14.3. start preparing the tendering documentation.