Liuzhou city is a successful industrial city in southwest of China. It is the second largest city and the largest industrial base in Guangxi Zhuang Autonomous Region. Over the past twenty years, the processes of industrialization and urbanization have resulted in pollution and a shortage of the land that pose barriers to further development. To cope with these problems, Liuzhou city has devised a strategy for the transformation for the city’s economic development known as the “Revitalization of the Urban Core” plan. Transformation involves extending the urban core through the creation of new districts, conversion of rural to urban space, and development of peripheral industrial parks. Once new space is available old polluting industries can construct and move to new less polluting facilities and the space they vacate can be revitalized: cleaned up and used for to develop high end technology and service sectors in the old core. As one of the urban areas of Liuzhou city, Yufeng district is the primary target for transformation. This analysis deals with the problems and the revitalization measures used to address them, the progress and current status of these efforts, and the challenges of the revitalization that remain for Yufeng district and Liuzhou city.

### Abstract
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- Over the past twenty years, the processes of industrialization and urbanization have resulted in pollution and a shortage of the land that pose barriers to further development.
- To cope with these problems, Liuzhou city has devised a strategy for the transformation for the city’s economic development known as the “Revitalization of the Urban Core” plan.
- Transformation involves extending the urban core through the creation of new districts, conversion of rural to urban space, and development of peripheral industrial parks.
- Once new space is available old polluting industries can construct and move to new less polluting facilities and the space they vacate can be revitalized: cleaned up and used for to develop high end technology and service sectors in the old core.

### Background
- Liuzhou city is the largest industrial base in Guangxi Province.
- Automobile, machinery, and metallurgy are the three pillar industries of Liuzhou city.
- By the year 2014, there were more than 3,400 industrial enterprises in Liuzhou, five of which were Chinese top 500 industrial enterprises.
- Yufeng District is in the southwest of Liuzhou. Having a population of 454 thousand, and an area of 474 square kilometers, Yufeng district is one of the four districts in Liuzhou City. There are plenty of natural tourism resources in Yufeng district, and it is also a traditional industrial district in Liuzhou.
- The industrial economy in Yufeng district developed rapidly in 1980s. The industrial production of Yufeng district was increased from about $4.9 million in 1980 to about $4.3 billion in 2014.

### Problems
- **Pollutions:**
  - Acid Rain: Liuzhou is a basin city. Because of the terrain of Liuzhou city, the exhaust gas discharged from the industrial enterprises are difficult to disperse. These emissions are the main cause of acid rain. At the end of the 1970s, the acid rain in Liuzhou was first found by local environmental workers. A local monitoring data shows that from 1985 to 1995, the highest acid rain frequency in Liuzhou was 98.5%. Liuzhou was one of the four most serious acid rain cities in China at that time.
  - Water Pollution: “You couldn’t imagine that such a beautiful waterfalls in Yufeng district was an outlet of a dyeing factory.” It’s said that in the last century, industrial wastewater and domestic sewage discharged into the river, and causing a lot of channels into the Liuljiang river. In 1996, the total industrial wastewater emissions was about 140 million tons.
- **Land Resources Shortage:**
  - With the economic and social development, the land resources cannot satisfy the further development of Liuzhou city. There are increasing conflicts between the limited land resource and the rising demand of urbanization, new industrialization and the development of service industry.
  - Shortage of land has become an important problem for the further development of social economy and people’s livelihood.

### Objectives
- Faced some ensuing problems of industrialization and urbanization such as pollution and limitation of the land, Liuzhou city decided to find an efficient way to accelerate the transformation of economic development. That is called ‘revitalization of the urban core’ plan. As one of the urban area of Liuzhou city, Yufeng district is a typical reformer in the revitalization. In this presentation, I will focus on the problems, revitalization measures, development status, and the challenges of the revitalization in Yufeng district and Liuzhou city.

### Challenges and Suggestions
- **Challenges:**
  - Economic Challenges in the Transformation Period: Lots of original industrial enterprises have moved out from urban area, but the new industrialization and service industry are not mature enough, and it leads to the weakness of the city economy.
  - Government Funding to Improve Education, Poverty Alleviation, Employment, Social Security, Health Care, and Food Safety Issue: Liuzhou allocated more resources in these two new districts. Thereby, the resources allocated to Yufeng district was limited.

- **Solutions**
  - **Extend Urban Core**
    - In recent years, in order to solve the problem of economic development and meet the bottlenecks, Liuzhou decided to extend the urban core to improve the bearing capacity of the city and the formation of new industry gathering area. In 2005, the government building of Yufeng district was moved from the original center to the southeast of Liuzhou. From then on, Yufeng district gradually focused on developing the undeveloped area in the southeast part of Liuzhou. Consequently, some new industrial parks were built and lots of industrial enterprises located in the urban area were shut down or moved to the undeveloped area.
  - **Revise Industrial Structure**
    - Shuttown and Remove Industrial Enterprises: In order to improve the environment, Liuzhou municipal government determined to shut down some heavily polluting enterprises, and push the rest of the industrial enterprises moving out from the urban area and concentrating in the industrial parks. Meanwhile, Liuzhou requires the industrial enterprises to enhance the level of clean production and pollution prevention ability. In 2014, there were ten industrial companies moving out from Yufeng district. There will be more industrial enterprises moved out from the urban area in 2015.
  - **Develop Services Industry**
    - Effects of the Solutions
      - Technology Upgrading: By implementing the strategies of “adjust the industry structure, accelerate the process of new industrialization”, Liuzhou makes huge progress in improving industrial quality, efficiency, and technology upgrading. In 2014, the industrial output value of strategic emerging industries reached $5.7 billion, accounting for 8.3% of the gross value of industrial output. 1.2% higher than that of 2013. (Liuzhou Municipal Government Annual Report, 2011). In 2014, Yufeng district government spent about $3.8 billion on science and technology fund and $1.1 billion on renewal and reconstruction funds to support industrial enterprises for technology upgrading.
    - Develop Services Industry: Yufeng district introduced two policies named “The Temporary Management Methods of Service Industry Supporting Funds in Yufeng District” and “The Temporary Supporting Methods for Enterprises or Units above Designated Scale”. By allocating supporting funds, Yufeng district encourage the service industrial enterprises to develop their business. In addition, through integrating the land resources of the moved-out industrial enterprises, Yufeng district tried to attract investments in department stores, hotels and other service projects. Besides, Yufeng district introduced and scientifically develop tourism projects in the rich natural landscape areas. In 2015, Yufeng district plans to implement 27 service industrial projects, with the total investment of $2.2 billion.

### Effects
- Great progress in environmental protection has been made in Liuzhou city. For instance, the average PH value of precipitation was 4.41 in 1993, while in 2012, the average PH value of precipitation was 5.65. In 1993, the acid rain frequency of Liuzhou was 98.5%, while in 2012, the acid rain frequency decreased to 11.3%. After years of governance, Liuzhou now has become a typical city of environmental protection. The water quality of Liuljiang river is one of the best in Guangxi province. F1 motorboat world championships held in Liuzhou for seven years because of the good water quality of Liuljiang river.