Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences

Personal information	
Name	Yuanjie Wang
Student number	6017274

Studio		
Name / Theme	Planning Complex Cities	
Main mentor	Marcin Dąbrowski	Section Spatial Planning and Strategy
Second mentor	Nikos Katsikis	Section of Urban Design
Argumentation of choice of the studio	I have chosen the Planning Complex Cities studio to explore the future development of post-industrial cities in northwest China, with Jinchang City, Gansu Province, as the research site. Jinchang City is my hometown, a resource-based city, that emerged due to nickel mining. The city faces complex challenges such as economic dependence on mineral resources, environmental degradation in the Gobi Desert and Shiyang River, and social issues related to population outflow and a lack of development opportunities. During my undergraduate studies in urban planning in China's northeastern old industrial base, I became aware of the many real-world challenges post-industrial cities face. This experience deepened my interest in urban transformation, motivated me to understand the challenges of my hometown from a professional perspective, and explored whether there are better planning solutions than those currently being implemented. The studio's focus on understanding and addressing urban complexity aligns with my project's goal of exploring sustainable transformation strategies to enhance urban livability and environmental integrity. By applying the studio's methodologies, I want to comprehensively analyze the challenges faced by Jinchang and propose context-specific planning solutions.	

Graduation project	
Title of the graduation project	*Those Who Leave and Those Who Stay*: exploring the future of post-industrial city -strategies and frameworks for sustainable transition of Jinchang city
Goal	
Location:	Jinchang City, Gansu Province, China

The posed problem	Key Issues: - Industrial Decline: The city is experiencing economic challenges due to its heavy reliance on mining, with limited diversification efforts, leading to vulnerabilities in the local economy. - Environmental Degradation: The expansion of industrial activities has resulted in significant ecological challenges, including desertification, water resource depletion, and pollution, threatening the long-term sustainability of the region. - Ineffectiveness of Existing Policies: Current policies and planning frameworks have been unable to effectively guide the city toward a sustainable urban future, often focusing on short-term economic goals rather than long-term resilience and sustainability.
research questions	**Main question: How can Jinchang city achieve a sustainable and equitable post-industrial transformation under the constraints of natural resources and National policies?** Sub-questions: 1. What are the key environmental challenges in Jinchang, and what are their underlying causes? 2. What challenges does Jinchang's current economic structure face in transitioning from a resource-dependent economy? 3. What are the main issues of social-spatial segregation in Jinchang, and how do they impact residents' quality of life? 4. What strategies can reimagine urban spaces by integrating natural elements and improving livability during Jinchang's industrial transformation? 5. What are the policy constraints in Jinchang's urban planning, and how can locally adapted, bottom-up approaches address these challenges?
design assignment in which these result.	

1.Regional Planning Advice:
Proposals for integrated regional planning that consider watershed protection, desertification control through shelterbelt construction, water resource planning, and mineral resource management. This includes defining the planning scope and establishing key planning principles.

2. Future Urban Development Scenarios
Explore potential future development paths for the city

3.Urban Planning Optimization Advice and Key Area Spatial Quality Improvement Strategies

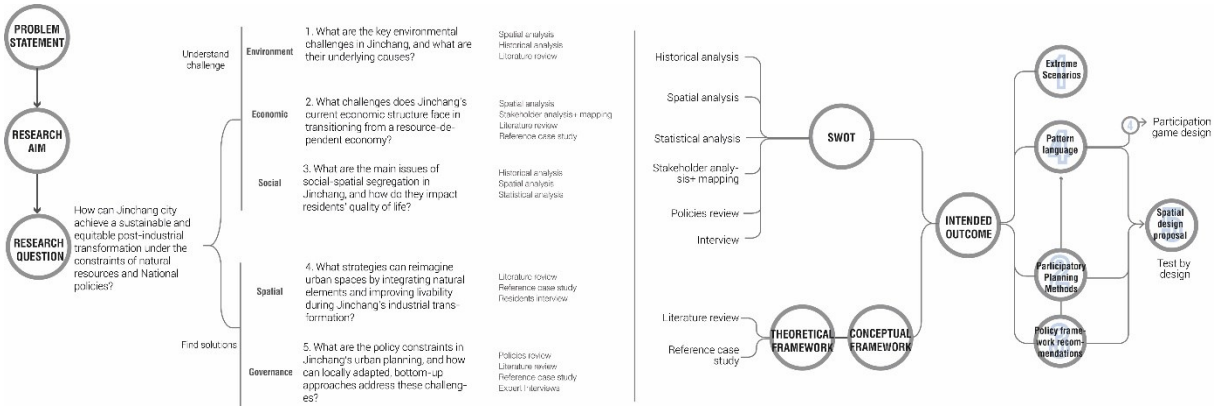
Proposals for optimizing the city's spatial planning and enhancing the spatial quality of key areas (including improve accessibility of public service facilities, reuse of industrial heritage, etc.)

4.Participatory Planning Strategies

Strategies to promote inclusive and participatory planning processes that engage the more stakeholders in the transformation process and decision making.

Process

Method description



1. historical analysis (desk research)
2. spatial analysis (desk research+ site visit)
3. statistical analysis (desk research)-space syntax
4. stakeholder analysis+ mapping (desk research+interview)
5. policies review (desk research)
6. expert+ residents interview (site visit)
7. literature review (desk research)
8. reference case study (desk research)

Literature and general practical references

1.Planning Policy Documents (National, Regional, Jinchang City): Covering several aspects, including economic development, mineral resource utilization, ecological protection, and spatial planning.
2.Theoretical Papers
3.Good practice examples: mainly on design with nature, post-industry city, Participatory planning aspect.
4. Consultation with experts: including specialists from local mining companies, experts in mining, history, and environmental protection from local academic institutions, as well as local urban planning practitioners.

Reflection

1. **Relation between the thesis topic and the Planning Complex Cities studio**:
   The thesis topic aligns with the focus of the Planning Complex Cities studio. Specifically, the thesis investigates the challenges of sustainable transformation in Jinchang, a shrinking post-industrial city in Northwest China, by examining the interactions between economic, environmental, and social factors. The research explores the spatial manifestations of industrial decline, environmental degradation, and socio-economic disparities, while also identifying gaps between existing policies, their implementation, and equity issues that hinder the city's sustainable future. The thesis aims to propose policy recommendations and spatial interventions to enhance urban resilience and foster sustainable development, aligning with the studio's goal of tackling urban complexity through multi-scalar and interdisciplinary strategies.
2. **between the thesis topic and the master's program in Urbanism**:
   The thesis aligns with the Urbanism master's program by addressing complex urban challenges through the interplay of spatial, social, and economic factors. It explores Jinchang's transformation from a resource-dependent economy to a diversified and sustainable future. The thesis also applying theories such as just transition and sustainable transformation to examine the impact of industrial activities on urban livability. By providing strategic, evidence-based planning solutions, the thesis contributes to the program's goal of fostering sustainable and resilient urban development.
3. **Societal Relevance**
   The thesis explores social issues such as population outflow, sense of identity caused by the emergence and transformation of industrial city. The city exists due to policy decisions, leading to population concentration in an environment that is naturally unsuitable for habitation. When considering the future of the city, challenges related to social identity and urban continuity arise. Understanding how Jinchang can achieve a more resilient and inclusive future is of significant relevance to other cities facing similar challenges.
4. **Scientific Relevance**
   The thesis use multi-scalar analytical framework to examine the interconnections between economic transformation, spatial planning, and environmental sustainability and governance. Utilizing concepts such as "The Planner's Triangle" and "Just Transition", the thesis establishes a systematic approach to assess

urban shrinkage and industrial transition within resource-dependent cities. The insights gained will enhance the academic discourse on post-industrial urban development, offering strategies for achieving sustainable economic diversification and strengthening environmental resilience.