Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners (Examencommissie-BK@tudelft.nl), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Giordana Credendino
Student number	4703251

Studio		
Name / Theme	Innovative Infrastructure Implementation	
Main mentor	Adriaan Geuze	Landscape Architecture
Second mentor	[]	[]
Argumentation of choice of the studio	The choice of this studio was born from my fascination for the technical application of innovative technology, with a desire to train a focus on understanding diagnosing vulnerable landscapes such as the Dutch territory. From a poetic and creative perspective I am also excited to explore the experience of fast and slow moving landscapes and the networks that can be formed within the window frame of a coach.	

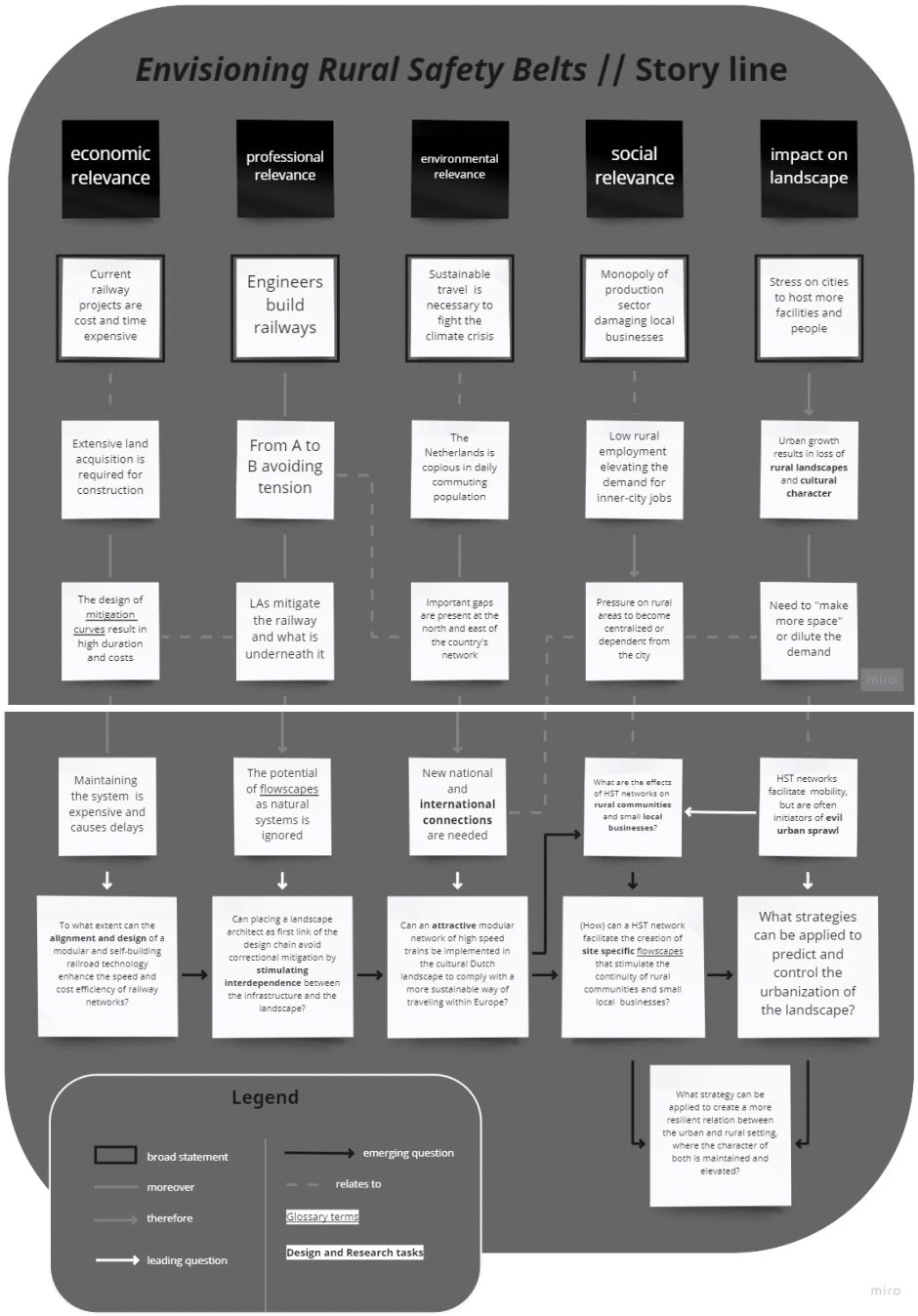
Graduation project	
Title (and subtitle) of the graduation project	Title: Envisioning Rural Safety Belts Subtitle: A landscape architect's multi-scale approach, from provincial planning to the implementation of innovative infrastructure.
Goal	
Location:	Focus on The netherlands: Overijssel province (from Zwolle to Enschede). Later application in Germany: between Enschede and Berlin, going through Hannover.

The posed problem,	International competitiveness and the resulting tendency of monopoly over the primary sector has been causing a worldwide disappearance of small local businesses. The demand for inner-city jobs is thus increasing, creating a new inflation in commuting population living in suburban or rural areas and working in cities. This lopsided dependency between the urban landscape and the rural one has posed constant new challenges involving the planning and design of our built environment, in relation to these flowscapes. The phenomena of urbanization implicates higher energy uses, private vehicles mobilization and very low resilience in times of crisis. Furthermore, studies show that the sporadic and unplanned growth of cities often results in loss of rural landscape, biodiversity and cultural character. The Netherlands has a rich history of railway construction that makes it a leading country in number of daily commuters on a national level. The extensive network that connects and forms the Randstad metropolitan region is enviable but as the mobility demand increases, new challenges emerge that need to be addressed. In this lab we explore the possibility to implement a more sustainable, resilient and inclusive mobility plan in particular between the north and east of the country, also allowing for international connections with Scandinavia and Germany. As we discover new technologies and innovative developmental concepts to resolve these potential issues, we must also reevaluate our systems and preconceptions about what the role of a landscape architect should be within these complex projects. In the design chain, the engineer conceives a network from A to B, envisioning a smooth implementation that aims at not causing political and environmental tension. The efforts of landscape architects are only required in the final steps of mitigating the implementation of the system with the underlaying land. This results in complex curves and less aesthetically invasive solutions (like tunnels and bridges).

research question (RQ) and subquestions (SQ#)	RQ1: Can a high speed train network, designed by a landscape architect, be implemented in the Dutch cultural landscape? RQ2: Can a high speed train network facilitate the creation of site specific flowscapes that stimulate the continuity and resilience of rural communities? SQ1: How can an attractive modular network of high speed trains be implemented in the cultural Dutch landscape to comply with a more sustainable way of traveling within Europe? SQ2: Can the alignment and design of a modular and precast railroad viaduct enhance the speed, quality and cost efficiency of railway development? SQ3: What collateral benefits / damage could high speed networks have on rural communities and small local businesses? SQ4: What strategies can be applied to create a more resilient relation between the urban and rural setting, where the character of both is maintained and elevated? SQ5: What strategies can be applied to manipulate evil urban sprawls in order to protect the existing landscape? SQ6: Can we stimulate interdependence between infrastructure and culture by exploring a landscape architecture multi-scale apprach to avoid correctional mitigation?

design assignment in which these result. (related to answering the sub questions)	(SQ1) Research through the design assignment of the lab to implement an innovative network in the cultural Dutch landscape. By assuming the role of landscape architect with engineering attitude in order to start conceptualising a model for the alignment of the viaduct. Performing a SWOT analysis to create parameters for an attractive design. (SQ2) The resulting reflection over the design conclusions and the spheres of relevance of this research will shine a light on this question. (SQ3) Step by step matrix assessment to comply with design parameters. Theoretical investigation through literature review and case study analysis. Design research through multi-scale models. (SQ4) Researching the adaptability of theoretical frameworks through design experimentation on multiple scales. Creating scenarios through speculation based on case study analysis. Exploring the relevance of innovative approaches through landscape design exercises. (SQ5) Literature review and case study analysis will form the framework, design experimentation and speculation based on research will answer this question. (SQ6) Design through different scales with strategy planning, pattern identification and solution based design exploration.
Process	

Method Description:



Research Question	Sub Research Questions	Methods	Expected Outcome
Can a high speed train network, designed by a landscape architect, be implemented in the Dutch cultural landscape?	How can an attractive modular network of high speed trains be implemented in the cultural Dutch landscape to comply with a more sustainable way of traveling within Europe?	Research through the design, engineering attitude, SWOT analysis, and parameter conceptualization.	Maps, matrix assessment form, alignment investigative sketches and preliminary categorization of design strategies.
	Can the alignment and design of a modular and precast railroad viaduct enhance the speed, quality and cost efficiency of railway development?	Reflection over the design conclusions.	Speculative calculations, qualitative description and critique in report form.
	Can we stimulate interdependence between infrastructure and culture by exploring a landscape architecture multi-scale apprach to avoid correctional mitigation?	Multi-scale research through design, strategic planning, and pattern analysis.	Analysis maps, strategy reflection in report form, exploratory section and impressions, perhaps digital models and diagrams.
Can a high speed train network facilitate the creation of site specific flowscapes that stimulate the continuity and resilience of rural communities?	What collateral benefits / damage could high speed networks have on rural communities and small local businesses?	Matrix assessment, literature review, case study analysis, and design research through multi-scale models.	Conceptual maps and reference sheets, construction diagrams and sketches, exploratory models with different options and critical points.
	What strategies can be applied to create a more resilient relation between the urban and rural setting, where the character of both is maintained and elevated?	Research through design on multiple scales, speculation, and case study analysis.	Masterplan and exploratory sketches on the urban / rural character paradigm, through sections, plans and impressions.
	What strategies can be applied to manipulate evil urban sprawls in order to protect the existing landscape?	Literature review, case study analysis, research through design, and speculation.	Masterplan and strategy report, framework application matrix and assessment in report form.

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Reflection

1. The Innovative Infrastructure Implementation lab focuses on a studio approach in which an engineering attitude is required. Thinking in systems and adopting a layerd analysis approach is crucial to this lab as well as to the department's approach. In the Landscape Architecture MSc track, we are invited to explore what the role of a landscape architect could be in the future, resolving multidisciplinary matters and looking for new design approaches and strategies. Within the structure of the master program in the Architecture, Urbanism and Buildind Sciences faculty the TU/Delft a strong fascination, and curious attitude are expected from a thesis outline.

2. In this thesis I try to explore topics such as the professional relevance of what the role of a Landscape Architect should be in our fast changing world; the economic relevance of researching and testing through design new innovative infrastructure implementations; the environmental relevance of exploring low carbon emission solutions for mobility; the social relevance of the impacts that modern large scale and rapidly applied develpments can have on the loss of local character and rural opportunitites; and the relevance on the overall impact that not testing out this lab topic could have on the landscape as a flowscape system.