

Graduation Plan



Graduation Plan: All tracks

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

Personal information	
Name	Wahyu Pratomo Hariyono
Student number	4411560
Telephone number	0617324507
Private e-mail address	wpratomo@icloud.com

Studio	
Name / Theme	Urban Metabolism/ Airport
Teachers / tutors	Franklin van der Hoeven, Egbert Stolk
Argumentation of choice of the studio	Node of mobility system; Urban design will be execute under future scenarios.

Graduation project	
Title of the graduation project	Airport-Driven Urban Development
Goal	
Location:	Amsterdam Airport Schiphol (Schiphol Centrum)
The posed problem,	<p>Airport cities (area around the terminal) are introduced along the way the airport grows. Because of the relationship to airport and aviation activity, development of terminal vicinity comes to a big dilemma: It is highly driven by airport activity, where things are changing (uncertainty).</p> <p>Future design is to come up with some result possibilities over assumptions that would happen. Without trying to reduce complexity, plan for airport downtown should be reviewed on scenarios to get to know how the urban design plan can perform under the framework of situation A or B or C.</p>
research questions and	What are factors that determine future scenarios of spatial airport downtown and how are they implied into a context of Amsterdam Airport Schiphol?
design assignment in which these result.	Hypothetical spatial forms: Simulations of selected scenarios, as representative of complexity in airport evolution.
<p>The purpose of simulation scenario is not only to give images and helps stakeholders to make future decision for every situations, but also to find the high quality design action that would redefine relationship between terminal, its surrounding and the regional it serves. The idea is not to create aerotropolis that can be adjusted to demands of aviation activity, but rather interrelation amongst airport downtown and terminal itself, better yet beneficial for regional context. Beside offers solution alternatives, design framework has to support not only economic viability, but also spatial continuous adaptability.</p>	
Process	

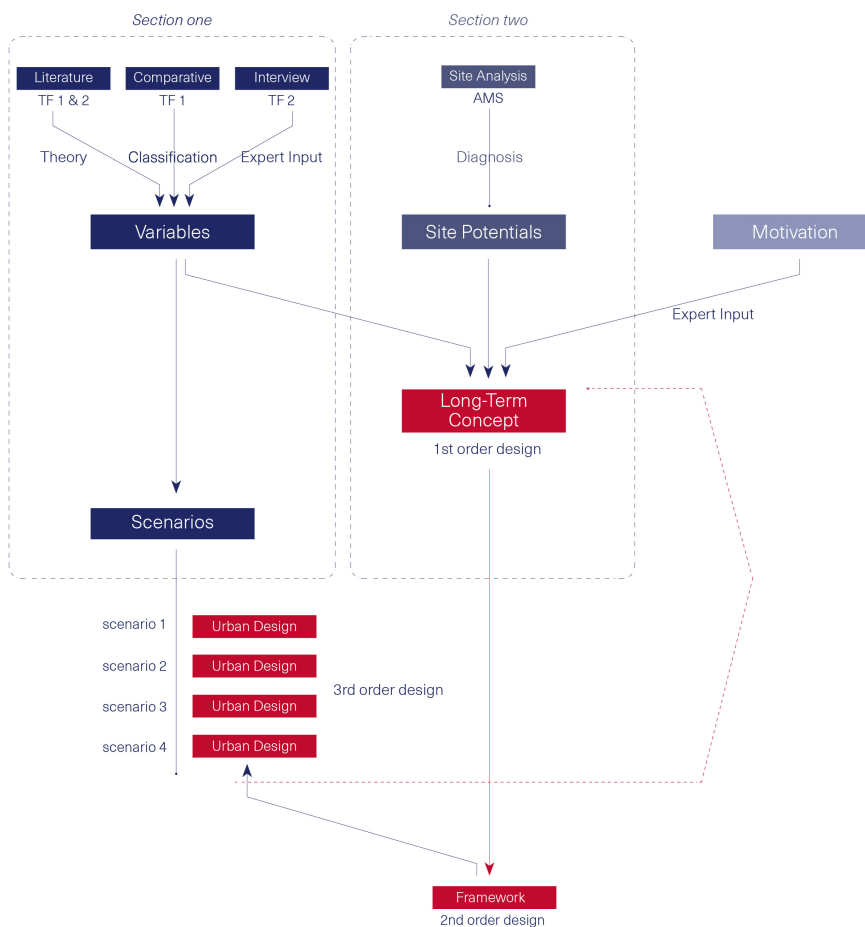
Method description

There is two main sections in the method. First section is the method to understand the two theoretical frameworks in airport context in order to find variables for future scenarios. Second section is the method to simulate how will the scenarios with variables input works in the context of Amsterdam Airport Schiphol. This section is focus on spatial issue, an urban design outcome that is delivered both by site analysis and first section of methodology.

To complete the first sections, literature study, comparative review, and engaged action are conducted to find comprehensive variables for scenario creation. These three inputs are attempts to interpret complexity from various perspectives: theory, real examples (9 airports) and expert information (academic and professional).

Section two is diagnosis discovery of multi scalar context of project site. Site analysis including spatial quality, specific demands and potential development is later added by value and findings in section one.

Combination of section one and two, with additional motivation, embody a desirable scheme and concept for future vision of airport city (1st order design). This general idea will produce a 'boundary' that keep the more detail design level in the same order. On the next level, design framework that contains physical rules is given as 2nd order design. Within the same framework, multiple scenarios are tested to give different outcomes in Amsterdam Airport Schiphol. Finally, simulations of selected scenarios, as representative of complexity in airport evolution, are later to be done in order to find out the hypothetical spatial forms (3rd order design) in Aerotropolis creation.



Literature and general practical preference

- Burghouwt, G., 2007. Airline network development in Europe and its implications for airport planning. Burlington, VT : Ashgate, Aldershot, Hampshire, England.
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- Manzini, E., François, J., 2000. The construction of Design Orienting Scenario. Delft University of Technology, Delft.
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- Robert Freestone, Douglas Baker, 2011. Spatial Planning Models of Airport-Driven Urban Development. Sage Publications, Journal of Planning Literature 26.
- Thissen, W.A., Walker, W.E., 2013. Public Policy Analysis : New Developments, International Series in Operations Research & Management Science. Springer, New York.
- van den Dobbelen, A., 2014. Better Airport Region. TU Delft, Faculty of Architecture and the Built Environment, Chair of Climate Design & Sustainability (CD&S), SBR-CURNET.

Reflection

Relevance

This research will be relevant to urban design research, civil aviation engineer, air transport operator and policy makers.

Within the research team of Urban Metabolism & Urban Fabric, the theme of mobility is put to air transport movement, as well as terminal operational system that affect spatial alteration significantly, even to architectural scale.

Additionally, due to airport future cities potential findings, sustainability on spatial quality has to be supported by understanding the relationship between urban environments to commuter systems and infrastructure performance. Eventually, airport downtown urban design will strongly give contribution to operational and accessibility in terminal area. For this reason, this research is relevant for civil engineering, specifically in air transportation field.

Apart from urbanism and civil engineering, the research is primarily relevant from economic viewpoint. By contributing tax, jobs and investments, airports become big players in city and country economy. At the same time, the ground around terminal building turns to be the most valuable and attractive real estate that offer grand interconnectivity in land and air.

For Schiphol Group and stakeholders for real estate planning, the research will contribute further discussion of challenging expansion and innovation in Amsterdam Airport Schiphol operation, as well as a tool to anticipate possibilities and scenarios in the next years.

Time planning

