

SEMIOSPHERE



**STATUS QUO:
LANGUAGES
SET FREE**

SURF

[Pilot package]



Põhja-Tallinn derelict railway territory almost inside the historical core of Tallinn city. The area of 350 000 sqm will be used for urban regeneration.

DESIGN BRIEF

The design processes in architecture and planning are changing rapidly. The first major disruption appeared in mainstream design technologies around 2000 with rapid digitalisation and automation in ICT. The second is coming up now with advanced development of Artificial Intelligence in language modelling and image creation. One can suspect that this will bring forward the Forth Technological Revolution.

Several predictions have been made. The most radical being the Ed Felten study: Occupational Heterogeneity in Exposure to Generative AI. It is divided into two: language modelling exposer and image generating exposer. In the first list of 15 professions to be seriously influenced by AI, are 12 postsecondary teachers. The professors of humanities are the first to go. In the second list of image generation the most exposed within the first 20 are: Interior designers, architects, art directors, drafters, civil engineers, commercial and industrial designers, film editors, multimedia and animation directors, graphic designers and desktop publishers.

To advance our knowledge in different design languages and establish the base-line to work further with more speculative approaches an experimental workflow was designed. It consist of 4 different design languages for urban planning task. The territory has to be the same, so the differences of the languages will emerge. The territory needs to be relatively large (if the project is to be conducted in urban planning). But other objects of the project can be chosen: architectural or design object.

The base-line language represents can be later compared with the new iterations of the design brief. As the digital sphere and AI develop extremely rapidly, the changes and developments can be seen in weeks and months.

The design language domains need to be different. For this particular task these design languages were chosen:

- 1 Current design practice in architectural office with mainstream design software.
- 2 Archaic design language of hand-drawn plans, sketches and other representational images.
- 3 AR and VR led design language of latest digital software.
- 4 AI assisted design language using text prompts and language modelling.

All the teams (2-3 persons), except for the AI language domain, are professional architects and planners. The AI assisted team consists of people advanced in software and computational models, but having no professional knowledge in planning and architecture.

DURATION

Can be adopted for semester-long project for Master students. In the format of CPD for young professionals a workshop of 3-4 days is optimal.

LEVEL OF STUDENT

CPD for young professionals.

OBJECTIVES AND EXPECTATIONS

- 1 Within the first iteration – within the workshop or project duration the following objectives are to be considered:
 - Compare the professional design languages to the non-professional AI assisted designs, to establish how exposed are the professions of architect and planner to the technological development in the current moment.
 - Create the awareness in general public of the different possibilities of the design languages, especially archaic and futuristic on the background of mainstream design practices. That will be made in the format of podcasts, exhibitions and digital catalogues.
 - Create a set of podcasts and syllabus for the CPD education in different design languages.
- 2 Within the further iterations – next semester projects or yearly workshops the following objectives are to be considered:
 - Make predictions how will the different design languages be used in the close future, on the background of changing technologies. Check which professional and mainstream AI are most commonly used.
 - Create the awareness in general public of the different possibilities of the new design languages, especially the futuristic and speculative ones.
 - Make a stand-point for the further studies in innovation and composition in architectural design processes and describe the base.line situation of the first iteration.

There is a wider expectation for the design brief within several iterations. The hypothesis that can be brought forward concerns the large language models and the large image models. It could be the case that the large models are inherently structural. There can be immanent build-up within the language or visual field itself. Then the AI modelling will also unconsciously reflect these inherent structures. To find and investigate these structures would be the wider goal of the iterative design tasks.

DELIVERABLES

- 1 One historical timeline that relates to your research theme;
- 2 One counterfactual timeline. Use your personal skills to set up an original format (illustrations, web programming, installation);
- 3 Design of material evidence that could exist along the counterfactual timeline (products, advertising material, etc.)
- 4 A text of 2000 words explaining your research problem.

KEY STAGES

Phase 1 [30% project duration]	Phase 2 [50% project duration]	Phase 3 [20% project duration]
Preparatory work before project launch	Design work during the workshop	Final project review, presentation and documentation

DETAILED SCHEDULE

PHASE 1

Preparatory work before project launch:

- 1 Define the theme, location and problematic of the project.
- 2 Conduct the expert interviews for methods and strategy.
- 3 Presentation of the brief and objectives of the workshop.
- 4 Presentation of the schedule and different steps.
- 5 Presentation of historical, political and cultural background.

PHASE 2

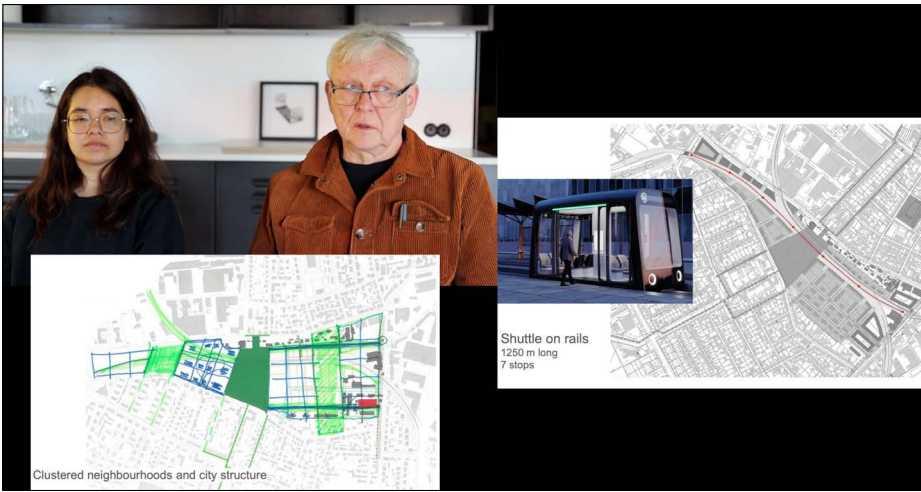
Design work during the workshop:

- 1 Presentation of intro and other workshop lectures.
- 2 Continued development of the project represents in different design languages.
- 3 Development / prototyping: continue working on design proposals.

PHASE 3

Final project review, presentation and documentation:

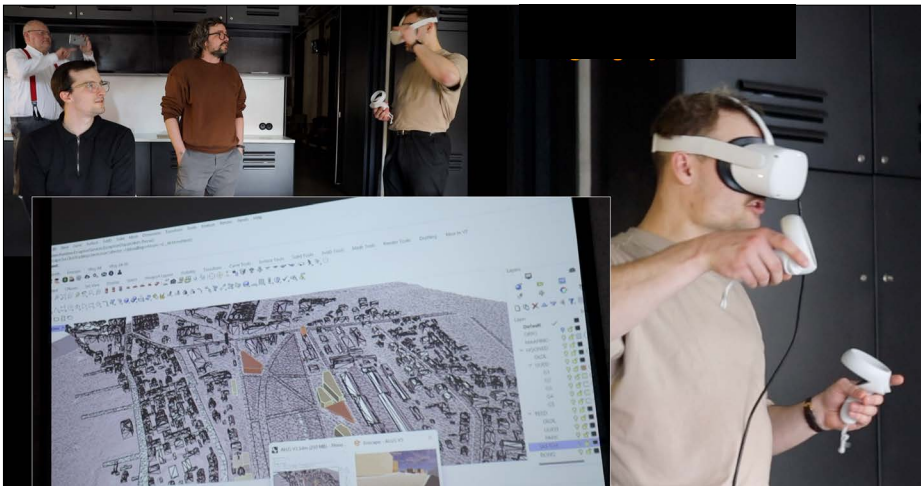
- 1 Final presentation of findings.
- 2 resentations are to be edited into podcasts and slide galleries.
- 3 Interpretation of the work done in scholarly report.



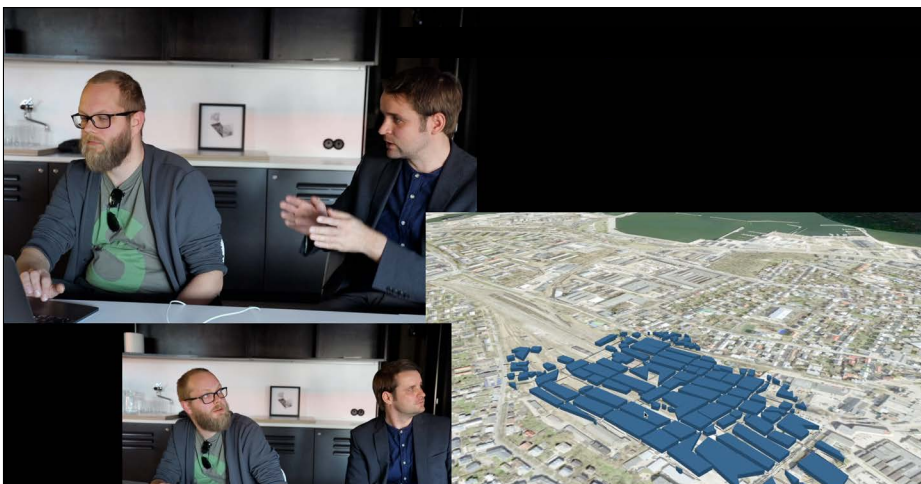
Traditional current professional office workflow



Pre-digital hand-drawing of project artefacts



VR induced sketching and designing: hybrid media



Nonprofessional designing with text prompts using AI

BIBLIOGRAPHY

- AI Trends & Predictions. Roadmap to 2025. Statista.
- Arntz, Melanie; Gregory, Terry and Zierahn, Ulrich. 2016. «The Risk of Automation for Jobs in OECD Countries». *OECD Social, Employment and Migration Working Papers*. No. 189. Paris: OECD Publishing.
- Bell, Daniel. 1987. «The World and the United States in 2013.» *Daedalus*. Summer, 1987, Vol. 116, No. 3, Futures (Summer, 1987), pp. 1-31.
- Carpo, Mario. 2011. *Alphabet and Algorithm*. The MIT Press.
- Carpo, Mario. 2017. *The Second Digital Turn. Design Beyond Intelligence*. The MIT Press.
- Eric Emerson Schmidt interview, <https://www.youtube.com/watch?v=DgpYiysQjel&t=10s>
- Felten, Ed; Raj, Manav; Seamans, Robert. 2023. Occupational Heterogeneity in Exposure to Generative AI. <https://www.ssrn.com/index.cfm/en/>
- Frey, Carl Benedkt and Osborne, Michael. 2013. *The Future of Employment: How Susceptible are Jobs to Computerisation?* September 17.
- Kalla, Dinesh; Smith, Nathan. 2023. Study and Analysis of Chat GPT and its Impact on Different Fields of Study. *International Journal of Innovative Science and Research Technology* ISSN No:-2456-2165
- Lotman, Juri. 1990. *Kultuurisemiootika*. Tallinn. Olion.
- Lotman, Juri. 2005. On the Semiosphere. *Sign System Studies* 33.1.
- Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation*, 4th Edition. Organisation for Economic Co-operation and Development (OECD) and Eurostat.
- Soolep, Jüri. 2018. Remarks for Diagnosis: Imagosphere Come. Architecture, Imagospheric Horizon and Digital Universe. *Archimedium*.
- The World Economy Special Report. *The Economist*. 4 October 2014.