SUPERSTUDIO
2019

SPACE
RAPA NUI
1) Studio objective

The objective of Superstudio is to provide final-year students with an opportunity to experience multidisciplinary design within a data-rich work environment. Over the course of 14 weeks, Superstudio participants will learn, firstly, how to relate specialist knowledge to a particular context; secondly, how to integrate numerous technical dimensions into a complex whole.

In implementing this agenda, Superstudio also seeks to provide a reflective counterpoint to those parts of the architectural curriculum within many schools that stress the value of disciplinary autonomy in architectural thinking. What would happen to architecture in a world characterised by absolute lack of autonomy? What could the function of architects and the tools of the discipline become then?

2) Subject matter

The suggested combination of complexity and constraint could have been tested by exploiting various locales as alternative rehearsing grounds for the exercise. We have, however, decided to focus on Rapa Nui, the remote legendary island in the middle of the Pacific Ocean, home to the Moai sculptures and also known as Easter Island.

The reasons are multiple. There is a symbolic dimension, reflected in the island’s world heritage status, which makes it familiar to the largest number of people across the globe whilst tying it to its past. There is both an historical and contemporary relationship with Swiss culture and technology, which makes its study align with the educational spirit and institutional mandate of the Swiss Federal Polytechnic. There is ‘isolation’ – a spatial quality that enables environmental dynamics of all kinds to be examined with a certain clarity. And there is also a need for circularity of resources, dictated by scarcity and remoteness, which is made both more interesting and trying by socio-political complexity.

With all its ordinary extra-ordinary features, Rapa Nui is a veritable testbed for the ability and the power of architecture to imagine and implement ecological strategies of great import that challenge conventional notions of form as well as our very understanding of the discipline we associate ourselves with.

3) Overall approach

The preceding section should have clarified that Superstudio Rapa Nui seeks to be an architectural exercise, rooted in landscape, building and space-making in defiance of all odds. Superstudio Rapa Nui does not focus on exegesis, metaphors or representation, but rather on the informed construction of physical territory in three- as well as multiple dimensions.
The scale, however, cannot be architectural in the way the term is conventionally used. Building (or rebuilding) Rapa Nui requires the setting up of institutional tectonics cutting across dimensional scales. It is for this reason that, as part of an agreement with the multiple seats of relevant government in Chile, Superstudio Rapa Nui is the subject of a multi-year engagement with the island, enabling the exploration of three scales of intervention: systemic / policy planning (2018), environmental / typological definition (2019), infrastructural / building design (2020).

4) Superstudio 2018 / System Rapa Nui

In line with this program, Superstudio 2018 (System Rapa Nui) focused on the development of a regional policy vision for the island, capable to consider and integrate all the issues affecting the future sustenance of the territory at macro level. The idea was to arrive at proposing a conceptual morphology for the system of relations likely to define proper life and inhabitation on the island, as well as an agenda for the physical implementation of such system.

5) Superstudio 2019 / Space Rapa Nui

This year’s Superstudio (Space Rapa Nui) turns its attention to building typology, more precisely the definition of spatial environmental models and associated technologies that can facilitate the performance imagined at territorial level by System Rapa Nui proposals.

6) Organization of the work

Superstudio will run over two full days of instruction and investigation a week. It comprises a four week-long series of lectures dealing with specific technological topics and two periods of student-led studio-based activities.

The semester is thus divided into three (plus one) parts:

- Part 1 - Normalization and translation of the information produced by System Rapa Nui in 2018 (3 weeks);
- Part 2 - Lecture cycle addressing relevant environmental topics and technological challenges for the building fabric in the island (4 weeks);
- Part 3 - Typological investigation of relevant building programs integrating the findings of the two previous phases (5 weeks);
- Part 4 - Debate over the results of the activity (1 week).

Finally, a selected group of students will travel to Rapa Nui in March 2020 to present and discuss with island representatives the details of the work carried out in Lausanne.
7) Part 1 – Normalization and translation

Part 1 is devoted to understanding content and results of the territory-focused work carried out in 2018. In the first week of class, the conceptual diagrams of the 10 group proposals will be redrawn according to one general visual template provided by FAR, so as to emphasize commonalities and differences between the schemes produced. The aim of this work is to go beyond the ‘alluring’ graphics of the various presentations, so as to distill ideas and positions underpinning each group’s output.

The work will be developed by following the instructions provided in class, on the basis of the documents made available in Moodle and the presentations given by last year’s students on September 18. Validation of the various ‘transcriptions’ by the groups that actually developed each of the proposal under examination can be obtained in a special session on September 25. The outcome of this exercise will be an A1 sheet (per group), to be submitted to FAR by September 30.

Once the ideas at the base of the proposals have been rendered to become legible comparatively, there will be another exercise, this time concerned with their translation ‘on the ground’. On October 1, FAR will distribute a template map of Rapa Nui accompanied by a set of ‘charting’ requirements. Students must follow these requirements to represent the ‘physical’ effect of the various conceptual positions on the actual map. In this case, previous students’ validation will be sought at the end of the exercise (October 2). The result of this mapping assignment will be a set of A2/A3 drawings (TBC), each isolating a particular phisical layer of the regional policy.

Part 1 will be developed in groups of 4/5 students, which will be formed by September 23. Each group will develop 1) a normalised version and 2) a set of translation drawings of a territorial proposal. This way, each territorial proposal will be interpreted three times for comparative purposes.

8) Part 2 – Technology review

The production of a new graphic record of the work carried out in 2018 signals the passage to Superstudio’s Part 2. Part 2 coincides with the set up of the techno-logical platform necessary to switch scale and lay out the necessary terms of reference for the discussion concerning the physical characteristics of the spatial fabric of the island. In order to achieve this goal, 16 topics have been identified from last year’s Superstudio experience, which warrant articulation in relation to Easter Island and its concrete challenges. Such topics are divided into 4 categories: land (soil erosion, water management, energy supply, waste management); people (land use, land title, transport, urban nature); abode (foundations, walls and openings, roofs, services); positions (recycling, robustness, identity, lightness). Each comprises four small lecture series of 4 hours in total, delivered over two weeks. Although the content may appear similar to that of other lectures in 2018, and in spite of sometimes similar labels, the 2019 lecture program relates to building fabric, while 2018 course material dealt with the whole region at macro level.

Content in this part will be delivered ex-cathedra by discipline experts. Student group work will be concerned with the identification and formatting of bad and good examples from practice. Each group
will concentrate on four topics and will produce a file on each for the Superstudio library to be submitted by October 15 (two topics) and November 4 (the other two). At the end of this stage, students should possess most of the fundamental knowledge required to move onto the third part of Superstudio.

9) Part 3 – Typological investigation

Part 3, the core of Space Rapa Nui, is centered around a simple question and its subsequent challenge: Can ‘territory’ and ‘building’ connect in ways that are mutually beneficial? Should they, in fact? And if the answer to the latter were positive, how can this be achieved?

Space Rapa Nui has been organised on the belief that the combination of ‘technology’ and ‘typology’ constitutes a powerful policy integration instrument, which not only enables the rational translation of large scale concepts into small scale artifacts, but also permits the existence of alternative opinions as well as their resolution through informed dialectics.

To prove this statement, Part 3 deals explicitly with the typological and technological challenges of the present and future building fabric in Rapa Nui. It is not the image or the project-specific features of the buildings that are of concern, but rather the underlying principles (and thus structuring) they respond to. As a result, students will be given four weeks, from November 12 to December 4, to reflect on and develop two building typologies per group, out of a possible pool of 16, which have been predetermined by FAR.

The cultural model to follow (and criticise) here goes back to the origin of the Ecole Polytechnique and the writings of Jean-Nicolas-Louis Durand (1760-1834), particularly the Summary of Lectures on Architecture Given at the École Polytechnique (1805), and the Compendium and Parallel of Buildings of all Kinds (1800), the first book organized by building type and with illustrations reproduced at the same scale.

In a way that is reminiscent of Durand’s work on building type variations, students will have to give spatial form and technical content to a building program in Rapa Nui, in line with the body of knowledge organised in Part 2, and then evaluate its necessary or natural transformations vis-à-vis the objectives of the 10 regional policy visions examined at the beginning of the semester. This is likely to produce a typological ‘kernel’ for each building program that is germane to Rapa Nui, accompanied by modifications that are the result of territorial management positions. The physical format of this exercise will be communicated at the beginning of Part 2 and will have to be submitted for assessment on December 19.

Support for this task will be provided in three ways. The first is the most traditional one – through a group tutorial structure that will meet once a week, Tuesday mornings, for four weeks, from November 11 to December 3. At the moment of writing this guide, each tutor is expected to have 4 to 8 students per hour (i.e. one to two groups). The second type of support is an introduction to the actual typologies of the island, which will be provided through lectures by FAR on November 5 and 6. The third type of
support is former System Rapa Nui students. Each week there will be at least one student per 2018 group (thus at least 10) acting as adviser in relation to their group’s original proposal. This will facilitate 2019 students’ understanding of its intents, and hence their ability to propose specific ways of adapting the technological and typological traits of their assigned building program to the larger territorial plan. The Q&A sessions with the groups will take place the morning of November 13, and in the afternoons of November 20, November 27 and December 4.

10) Part 4 – Final debate

Whilst critical to the pedagogical remit of the subject, the sort of typological development sought in Part 3 is not the end of the process but rather a base for discussing its results and projecting its intellectual consequences. This will take place in Part 4, a short appendix to Superstudio scheduled for December 17/18. During these two days, students will compare their propositions, explicitly (on December 17) and implicitly (on December 18).

On the first of these two days, each of the 16 building typologies will become the subject of a final review-like session, where the four propositions will be compared and discussed by the groups that worked on them. There will be four parallel reviews sessions spread across the day, with 4 groups in each review – essentially the size of an atelier. Each group will have its members participate in two reviews, one in the morning and one in the afternoon.

The second day will provide opportunities for overall reflection and synthesis. It will feature six consecutive moderated debates revolving around the relationship between environmental policy and building design, each with (in principle) 5 speakers chosen by their groups and assigned to the various debates by FAR. This way, there will be a 25% representation of the student cohort in the discussion. The six debates will be prompted by statements that are strategically provocative, and which will serve as an opportunity for students (and their groups) to stage an opinion on the basis of the work done across the semester. At the moment, the six originating lines are as follows:

1) Environmental design can ignore culture.
2) Building function takes precedence over symbolic form.
3) True modernity erases tradition.
4) Technology is neutral, environmental comfort is not a design variable.
5) Architecture is separate from planning, and cannot embody collective interests and good.
6) Community is a misleading concept in environmental design.

This event will help FAR select the students travelling to Rapa Nui in March 2020.

11) Feedback and continuity

Since Superstudio is a multi-year / multi-dimensional project carried out in collaboration with other academic institutions and distant local government, continuity between years, analytical dimensions
and proposals-and-responses constitutes a critical variable of the overall endeavour. For this reason, the results of each year’s work must be shared, discussed and, if necessary, modified with the other actors in the process, from bureaucracy to community members, policy-makers to scholars. To this end, and as already indicated, *Space Rapa Nui* is set to travel to Rapa Nui, to share the results of the typological study and receive feedback from its communities. This very task will take place in March 2020, when a group of students selected on the basis of their performance in the subject will travel to the island at the expense of Superstudio, to present their ideas in public fora. The result of the ensuing discussions will work as the basis for the work to be carried out in 2020: a series of building prototypes to be developed on the island.

12) **Assessment and grading**

Student grading will be the result of five components:

1) graphic re-interpretation of Superstudio 2018 proposals (within Part 1 - 10%);

2) proposals’ content translation into a new format as determined by Superstudio coordination (within Part 1 - 15%);

3) research, selection, formatting of best/worst case examples of specific technological applications (within Part 2 - 20%);

4) development of two typological proposals for given building programs (within Part 3 - 50%);

5) public defense of their strengths (within Part 4 - 5%)

The assessment of components 1 to 4 will be done ‘in absentia’ by Superstudio coordinators, by focusing exclusively on the materials produced and submitted, and not on the students’ presentations.

13) **Learning outcomes**

By the end of the Superstudio program, students are expected to show familiarity with the:

1) interpretation of socio-technical outcomes / contexts;

2) assessment of technological applicability;

3) integration of analytical dimensions;

4) establishment of problem hierarchies;

5) formulation of strategic plans;

6) assessment / evaluation of the viability of proposals.

(As per university stipulations, this will be likely to reflect their ability to: a) make optimal use of available time and other resources; b) set objectives and design an action plan to reach those objectives; c) communicate effectively with professionals from other disciplines; d) demonstrate
capacity for critical thinking; e) access and evaluate appropriate sources of information; f) process data; g) interpret technical reporting.)

14) Resources

*Space Rapa Nui* relies on a vast array of documentary sources and resources in multiple languages and media. Those without confidentiality clauses have been made available to the students in their original format within Moodle. Confidential documents have been summarised by Superstudio and either provided as memoranda or inserted into lecture content.

15) Contact

The coordination of Superstudio can be contacted within Moodle or at the following digital and physical addresses:

Oliver Cretton  ([oliver.cretton@alumni.epfl.com](mailto:oliver.cretton@alumni.epfl.com))
Carola Beovic  ([carolina.beovic@epfl.ch](mailto:carolina.beovic@epfl.ch))
Andre Ullal  ([andre.ullal@epfl.ch](mailto:andre.ullal@epfl.ch))

EPFL Smart Living Lab, Blue Factory (Halle Bleue), Passage du Cardinal 13b, Fribourg, +41 21 6957212; EPFL ENAC IA-FAR BP 4241 (Bâtiment BP) Station 16 CH-1015 Lausanne.
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<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Time</th>
<th>Room</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<td>17/9</td>
<td>08:15 - 09:00</td>
<td>AAC231</td>
<td>Normalization exercise - Intro</td>
<td>Normalization exercise - groups</td>
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<td>24/9</td>
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<td>25/9</td>
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### Weeks 8 to 12 – APPLICATION

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#### Phase 3

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<td>Summary</td>
<td>Weeks 4 to 7</td>
<td>Hospitality</td>
<td>Tutorial</td>
<td>Q&amp;A Groups 1 - 5</td>
<td>Tutorial 1 - 8</td>
<td>Tutorial 9 - 16</td>
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#### Weeks 5 to 7

- **Hospitality Tutorial**
- **Q&A Groups 1 - 5**
- **Tutorial 1 - 8**
- **Tutorial 9 - 16**
- **Tutorial 17 - 24**
- **Tutorial 25 - 32**
- **Review A (4 types)**
- **Debate A**
- **Debate B**
- **Debate C**
- **Review B (4 types)**
- **Review C (4 types)**
- **Debate D**
- **Debate E**
- **Debate F**
- **Review D (4 types)**

#### Weeks 8 to 12

- **Typology Intro**
- **Analysis**
- **Development**
- **Finalization**
- **Production**
- **Presentation**
- **Room**
- **Time**
- **Content**
- **Debate**
- **Review**
- **Groups**