

CA²RE+

1 STRATEGIES OF DESIGN-DRIVEN RESEARCH



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**STRATEGIES OF
DESIGN-DRIVEN
RESEARCH**

CA²RE+ PARTNERS



A R E N A



Conference for
Artistic and
Architectural
REsearch

CA²
RE+ Collective
Evaluation of
Design Driven
Doctoral Training

Univerza v Ljubljani



European Association for
Architectural Education
Association Européenne pour
l'Enseignement de l'Architecture

TU Delft



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MILANO 1863

KU LEUVEN

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University
Hamburg



UNIVERSIDADE
LUSÓFONA
DO PORTO

NTNU



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CA²RE+

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The Erasmus+ Strategic Partnership CA²RE+ research academy develops a collective learning environment through Evaluation of Design Driven Doctoral Training. Design Driven Doctoral research (DDDr) is taken as a multidisciplinary example of an experiential learning-through-evaluation model, appropriate for identifying and promoting the relevance of research singularity, as well as its transparency and recognition, to award excellence in doctoral training for creative and culturally rooted solutions within contemporary design-driven developments.

The CA²RE+ explicates the transformative and innovative power of highly individual strategies in artistic research, the diversity of research traditions, and the integrative nature of architectural design research, and is able to face contemporary knowledge fragmentation in the humanities, social sciences, and technology. It explicates the interdisciplinary relevance of convergent thinking, mastering 'wicked problems', open-ended processes, resilience, and risk, as well as orientation towards the future, all present in DDDr. It explicates the didactic relevance of DDDr for training creative professionals in how to use the integrative power of design thinking to master open-ended processes while solving contemporary spatial dilemmas (sociological, political, related to climate change, etc.).

In the arts, architecture, and design, the understanding of reality aimed at future creations, however convincing, remains based on a personal and creative aspect, where the relevance of the singularity of particular cases plays a key role in research strategies and evaluation. The evaluation

of this type of relevance requires the explication of tacit knowledge and evidence of research impact, including non-written production. These needs have been identified by the CA²RE community through its biannual Conferences on Artistic and Architectural Research, as a follow-up to the ADAPT-r project (Architecture, Design and Art Practice Training-research / EU ITN).

CA²RE+ PARTNERS

The CA²RE+ project can only be carried out transnationally: it is based on cultural diversity, the diversity of academic environments and research traditions, and the diversity of creative practices in core areas dealing with creativity and culture. The CA²RE+ Strategic Partnership joins eleven organisations and associations from eight EU countries: University of Ljubljana, Aarhus School of Architecture, KU Leuven, Politecnico di Milano, TU Berlin, COFAC – Lusofona University, HafenCity University Hamburg, Norwegian University of Science and Technology (NTNU), TU Delft, the European Association for Architectural Education (EAAE), and the European League of Institutes of the Arts (ELIA). ARENA (Architectural Research European Network Association) and the Glasgow School of Art (GSA) are associated partners of the network.

All partners have long traditions for providing doctoral education. They also all share experience with EU projects, such as Erasmus+ Strategic Partnerships. University of Ljubljana, KU Leuven, Politecnico di Milano, TU Berlin, NTNU, and TU Delft are part of comprehensive institutions. The Aarhus School of Architecture and COFAC – Lusofona University bring the flexibility of

design-focused doctoral programmes at smaller institutions. HafenCity University Hamburg represents the freshness of a newly established, specialised university. EAAE and ELIA contribute strong university networks.

The key persons from the CA²RE+ academic partners are experts in architecture (from all partners), landscape architecture (TU Berlin), urban design (University of Ljubljana, Politecnico di Milano, TU Delft), interior design (Politecnico di Milano), (visual) arts and design (University of Ljubljana), and environmental psychology and urban sociology (University of Ljubljana). The key persons from EAAE represent architecture as a cross-disciplinary research area, while those from ELIA represent the supra-disciplinary field of the arts (from visual to performing arts).

The CA²RE+ Strategic Partnership builds on the experience of the CA²RE community and its biannual Conferences on Artistic and Architectural Research, held since autumn 2016 and organised in association with ARENA, EAAE, and ELIA. CA²RE is a follow-up to the ADAPT-r project (Architecture, Design and Art Practice Training-research / EU ITN), where creative practice research was the main focus.

OBJECTIVES

The CA²RE+ advances doctoral training from a supportive action to an experimental collective evaluation training environment for DDDr. It critically transfers the traditional design studio learning model from the master's to the doctoral level; learners at different stages of their process

learn collectively with evaluators in an iterative way. Achieved iteratively through the main project steps, from observation and sharing, comparison and reflection, to reformulation and recommendation, the project objectives are:

1. to develop a collective learning environment through the evaluation of DDDr training
2. to create evidence of the DDDr learning environment and evaluation materials
3. to identify the DDDr strategies, to explicate the DDDr evaluation process, and to prepare the DDDr framework
4. to disseminate the CA²RE+ learning-through-evaluation model and its framework

STRUCTURE AND RESULTS

CA²RE+ is structured into six project steps, which are reflected in the consecutive order of events and intellectual outputs. The first year—covered by this book—focuses on ‘Observation’ and ‘Sharing’. It builds on profound and open observation and the sharing of diverse local and regional research cultures in a transnational perspective. This includes the different conditions for doctoral students, with the aim of identifying both the diverse and common approaches and methods that can point toward DDDr ‘Strategies’. The second year focuses on ‘Comparison’ and ‘Reflection’. The network will compare, discuss, and evaluate observations from the first year, with the aim of identifying and specifying national differences and European com-

monalities as well as weaknesses and strengths. The third and final year will explore the themes 'Reformulation' and 'Recommendation'. The network will reformulate the research traditions that have been identified and developed during the project and move towards common recommendations for a DDDr 'Framework', which considers local peculiarities but above all forms a common foundation for the future of DDDr in Europe.

Within this structure, the following results will be realised:

- 1. DDDr Evaluation Course: a doctoral training course that develops a collective learning environment through the evaluation of DDDr training**

The backbone of the CA²RE+ Strategic Partnership is a series of biannual international and intercultural Intensive Study Programmes (ISPs) for doctoral candidates, guided by experienced evaluators from participating universities and invited experts. The doctoral work-in-progress is evaluated through presentations, performances, exhibitions, and critical discussions, following the iterative CA²RE+ project steps: Observation, Sharing, Comparison, Reflection, Reformulation, and Recommendation. To introduce new experts with low evaluation experience into the process, a Joint Staff Training (JST) is developed at each venue.

The CA²RE+ course is a tangible result in itself—a collective approach to doctoral evaluation processes. The development and iterative implementation of such a collective learning-through- evaluation model raises awareness

of the research quality and relevance of research singularity by the doctoral candidates and their evaluators. New knowledge is created through evaluation experiences with discussions, presentations, performances, and exhibitions. The doctoral candidates get an opportunity to invite their evaluators into their personal research strategies, and the evaluators get the chance to immerse themselves in specific, culturally rooted situations, the modes of candidates' convergent thinking, mastering wicked problems, open-ended processes, resilience, and risk. The self-assessment and evaluation skills of all the participants are improved and their achievements are explicated and made shareable, and thus visible. The international and intercultural setting enables shared solutions and evaluation expertise; the result is improved cultural awareness of research training communities.

2. Database on DDDr EXPERIENCES: a multimedia database that collects evidence of the DDDr learning environment and evaluation materials

The public database on DDDr EXPERIENCES offers the CA²RE+ multimedia courseware for learning from raw evaluation data. It evidences the case studies/strategies of tacit knowledge explication on DDDr examples and its evaluation experiences, as well as DDDr research impact evidence examples, including non-written production, to further develop research strategies.

3. Three open-access books: the first book identifies DDDr Strategies, the second explicates the DDDr Evaluation process, and the third develops the DDDr Framework

The open-access book series on DDDr Strategies, DDDr Evaluation, and DDDr Framework offers a set of interpretations, recommendations, and guidelines for the implementation and evaluation of DDDr-related doctoral programmes, the development of starting points for DDDr, and the relevance of findings for the humanities and social sciences.

4. CA²RE+ events and materials

The dissemination activities and materials bring the CA²RE+ learning-through-evaluation model and its findings to audiences from the humanities and social sciences, especially to the multidisciplinary course and evaluation framework and education policy developers.

RESULTS

The public database on DDDr EXPERIENCES offers the CA²RE+ multimedia courseware for learning from raw evaluation data. It evidences the case studies/strategies of tacit knowledge explication on DDDr examples and its evaluation experiences to further develop research strategies. The open-access book series offers a set of interpretations, recommendations, and guidelines for the implementation of evaluation of DDDr-related doctoral programmes, the development of starting points for DDDr, and the relevance of findings for the humanities and social sciences.

IMPACT & BENEFITS

Long-term benefits are expected for doctoral researchers, creative practitioners, evaluators,

multidisciplinary course/programme developers, and education policymakers, aimed at a creative refreshment of qualitative research. Sharing and comparing doctoral training across research traditions and cultures within the core areas, as well as dealing with creativity and culture, leads to transparency and recognition of tacit skills and qualifications. The development of collective evaluation courses contributes to promoting and rewarding excellence in teaching and skills development. The explication of tacit knowledge from evaluation experience through a multimedia database contributes to consolidation and improving evidence-building on higher education.

ABOUT THIS BOOK

This is the first of the three CA²RE+ books. It discusses and identifies the long-term development goals and potentials of Design Driven Doctoral Research. It situates DDDr in an academic context of research by addressing research done within the proliferating field of research-by-design.

The book will, however, also discuss DDDr in the broader context of explorative and constructive research within the humanities, social sciences, and relevant areas of technical research.

The Strategies book examines the potential of DDDr to build bridges between academic research and professional creative practices. How can DDDr contribute to the understanding of creative processes that deal with wicked problems and undefined outcomes? How can design-driven research contribute to better design processes and better design solutions?

the book examines the current status of how research questions are articulated or discovered, how research methodologies are created, how supervision takes place, and how evaluation is carried out. The book identifies good practices as well as methodological gaps to be further explored and developed through the second and third CA²RE+ books. The book also examines DDDr in the context of national academic research frameworks. It identifies examples, practices, and conditions in local research traditions to explore qualities and potentials. It discusses how the community and shared supervision model of CA²RE+ can build and expand on these traditions with the aim of strengthened collaborations which build on respect for local identities.

The Strategies book introduces DDDr on different levels: from international perspectives and national contexts, to individual research. The plural 'Strategies' in the title of the book is understood on several levels. It seeks elements of innovation in DDDr in a broad academic and professional context and looks for ways to learn from local research traditions, to determine how the CA²RE+ network can support and impact back on these traditions. It also looks for specific strategies that doctoral fellows and supervisors engage in developing design-driven research in fruitful ways.

The book builds on presentations and discussions from the first two CA²RE+ intensive study programmes, under the topics 'Observation' and 'Sharing'. It contains contributions from doctoral fellows and supervisors from the CA²RE+ partners and includes contributions by external reporters

and guests, who provide overall views of research, external perspectives, and general reflections on the relevance of what they experience as invitees to the presentation. Moreover, it contains examples of PhD work, aimed at giving specific examples of research findings, methodologies, and contributions.

The book's target group includes academics, organisers of doctoral programmes, administrators, creative professional practitioners interested in design-driven research, organisational bodies within design and the arts, and current or potential postgraduate fellows.

PEER REVIEWING

Peer reviewing plays a vital role in the CA²RE+ project's ambition of strengthening quality assurance and research rigour of design-driven research. The peer-reviewing is carried out at several stages and the doctoral presentations included in this publication have gone through three reviews.

The scientific committee did the first stage of peer-review on the submitted abstracts. Each abstract was checked blindly by three independent committee members. The reviewers scored and commented on the abstracts, and we admitted the highest-scoring abstracts for the limited presentation slots at the CA²RE event. The authors of accepted abstracts were requested to present a full paper, an in-progress project or an exhibition/ artefact at the conference.

review takes place at the event. We provide sixty minutes for presentation and feedback and encourage the presenters to update their presentations after the conference in response to the panel's comments. We have chosen this peer-reviewing process to support CA²RE+'s ambition of creating an inclusive and supportive peer-review process that can address developing and emerging research and research that has reached a stage where the researcher can present argued findings. The ample time given to each presentation allows for the critical engagement of peers. The face-to-face meeting supports the ability to engage in hybrid modes of discussions that include interaction with artefacts and visual representations and performances. We consider the process rigorous, although it deviates from traditional standards of anonymized academic reviewing. This immersive verbal feedback has proven to be particularly relevant for promoting and securing the quality and rigour of design-driven research.

For this publication, we have carried out a third stage peer review to select the best presentations. CA²RE panel members identified the projects with the highest quality and most original application of design-driven research. The editors invited the presentations proposed by most panel members for publication. Presentations are, in some cases, further developed from material previously published in conference proceedings. The presenters revised texts, added images, and submitted new texts in a few instances. We have let the contributors decide how to present their material to represent the diversity of design-driven research.

The publication has been peer-reviewed in its totality by the advisory board of CA²RE+ as a fourth stage. We asked the board to comment on the structure, coherency and the general quality and validity of contributions. The board has offered valuable critic and feedback that has sharpened the publication.

We plan to perform a fifth post-publication peer review of the CA²RE+ book series when the subsequent two publications are published. External reviewers will carry out this review to contribute to the ongoing development of the field. Finally, it is worth mentioning that the testimonials and the concluding text contribute to the peer-reviewing by sharing and analyzing the participant's feedback and criticism of the CA²RE+/CA²RE framework and methods.

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