



CREATURES



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870759

CREATURES DELIVERABLE

D3.2 EXPERIMENTAL PRODUCTIONS ROADMAP V2

Grant Agreement number	870759
Action Acronym	CreaTures
Action Title	Creative Practices for Transformational Futures
Funding Scheme	H2020 Societal Challenges: Inclusive, innovative and reflective societies
Version date of the Annex I against which the assessment will be made	October 9 th , 2019
Start date of the project	January 1 st , 2020
Due date of the deliverable	December 31 st , 2021
Actual date of submission	December 22 nd , 2021
Lead beneficiary for the deliverable	AALTO
Dissemination level of the deliverable	Public

ACTION COORDINATOR'S SCIENTIFIC REPRESENTATIVE

Prof. Tuuli Mattelmäki

AALTO-KORKEAKOULUSÄÄTIÖ,

Aalto University School of Arts, Design and Architecture: Department of Design

tuuli.mattelmaki@aalto.fi

This document has been produced by the CreaTures project, funded by the Horizon 2020 Programme of the European Community. The content presented in this document represents the views of the authors, and the European Commission has no liability in respect of the content.

Authors in alphabetical order		
Name	Beneficiary	E-mail
Cristina Ampatzidou	RMIT-EU	cristina.ampatzidou@rmit.edu.au
Andrea Botero	Aalto	andrea.botero@aalto.fi
Ruth Catlow	Furtherfield	ruth.catlow@furtherfield.org
Jaz Hee-jeong Choi	RMIT-AUS	jaz.hee-jeong.choi@rmit.edu.au
Markéta Dolejšová	Aalto	marketa.dolejsova@aalto.fi
Felipe González Gil	Zemos98	felipe@zemos98.org
Rosalía Gutierrez	Zemos98	rosalia@zemos98.org
Kirsi Hakio	Aalto	kirsi.hakio@aalto.fi
Amira Hanafi	RMIT-EU	hello@amiraha.com
Lara Houston	UoS	l.houston@sussex.ac.uk
Anab Jain	Superflux	anab@superflux.in
Julia Lohmann	Aalto	julia.lohmann@aalto.fi
Tuuli Mattelmäki	Aalto	tuuli.mattelmaki@aalto.fi
Jana Putrle Srdic	Kersnikova	jana.putrle@kapelica.org
Eva Tausig	Superflux	eva@superflux.in
Kirsikka Vaajakallio	Hellon	kirsikka.vaajakallio@hellon.com

Abstract
<p>This deliverable describes production and implementation activities related to CreaTures experimental productions (ExPs). It outlines the shared ExPs' goal to contribute towards eco-social transformation and the interdisciplinary approach embraced by the consortium to facilitate the ExPs' development. This second version of the deliverable (v2) details 20 ExPs that have been produced and implemented, or confirmed for production, within the period of M6-M24. Key part of this deliverable is the ExP Timeline – a shared calendar board that summarises the past, present and upcoming production and implementation processes for all CreaTures ExPs. The Timeline is available in two formats: as an internal .xls sheet and a public, online tool. Along with these two formats, the Timeline serves as an entry point for 1) all consortium members to plan and coordinate their research activities around each ExP and 2) project audiences to get acquainted with the ExPs' scopes and public-facing activities.</p>

Contents

1. Introduction	2
1.1 About CreaTures	2
1.2 Interdisciplinary consortium	2
1.3 The purpose of this deliverable	3
1.4 How this deliverable was produced	3
2. CreaTures Experimental Productions (ExPs)	4
2.1 Interdisciplinary approach to ExPs development	5
2.2 Overview of existing and planned ExPs	5
3. Future plans	9
References	9
Annex I	11
ExPs Timeline	11

1. Introduction

1.1 About CreaTures

Creative practices have already shown transformational potential in the area of social cohesion and environmental citizenship, but they are often fragmented, poorly resourced and badly understood. The CreaTures project demonstrates the power of existing, yet often hidden, creative practices to move the world towards social and ecological sustainability by identifying those aspects of creative practice that contribute most effectively to positive socio-cultural transformation.

Drawing on pilot research (Light, Wolstenholme and Twist, 2019) showing that collaboration, reflection and direct engagement are key to changing the public's orientation to social and ecological issues, the project involves three interrelated components:

- *Observatory*, identifying and mapping existing, fragmented and often hidden transformational creative practices
- *Laboratory*, supporting new experimentation and direct engagement with diverse stakeholders by mounting several different scales and types of experimental productions (ExPs). The ExPs are art and design projects set up as temporary co-creative spaces that share the common goal of supporting sustainable transformative processes. Mobilising specific forms of artistic knowledge, the ExPs engage publics and stakeholders in sustainability-related experiences at selected locations across Europe.
- *Evaluation* phase, testing new and existing creative practices for their impact in a systematic and concerted way.

These components are interwoven with a series of engagement events enabling broad access to the evolving outcomes of the project for different groups, including policy actors, scientific community, and members of the public.

The project will combine insights from these undertakings into an open-access, transdisciplinary, evidence-based and practical framework demonstrating effective paths to achieving sustainability, social cohesion and peaceful co-existence at a time of rapid change. The framework will offer a strategic research agenda for key stakeholders, a set of innovations addressing the cultures and conditions for delivering greater sustainability, and policy recommendations to focus and optimise work in mobilizing the arts for transformational futures.

1.2 Interdisciplinary consortium

The CreaTures project brings together an interdisciplinary consortium that unites emerging and established research approaches to creative practice and sustainability, drawing on arts, science and social science. In addition to academic researchers, the project includes professional creative practitioners and social change organisations who are experts within the field of sustainability and eco-social transformation. This project design allows for free exchange of ideas: compared with projects where knowledge production resides only with academics, this approach allows practitioner insights to be disseminated more widely into policy and for research to travel further amongst practitioner communities (details available in the project's Description of Action, DOA).

Specifically, the CreaTures consortium brings together following organisations: Aalto University School of Arts, Design and Architecture (FI) is the project coordinator and a frontrunner in artistic and practice-based research, with strong expertise in collaborative and co-creation projects. The University of Sussex's Sustainability Research Programme (UK) is designed to bring together interdisciplinary teams to tackle complex sustainability issues and the pilot work behind the CreaTures proposal was undertaken there. RMIT Europe (ES), as an extension of RMIT Australia,

contributes considerable expertise in care-full design, engagement practices and urban transformations. The Utrecht University (NL) brings expertise on governance processes, pathways to sustainability and the use of simulation games. Alongside this research expertise, the project involves skilled creative practices led by major art and design organisations: Superflux (UK) and Hellon (FI) are design studios practising consulting and commissioning work for private and public organisations. Furtherfield (UK) and Kersnikova (SI) are arts collectives that act as cultural institutions and producers, reaching a wider network of artists located throughout Europe. ZEMOS98 (ES) is a creative arts cooperative with extensive networks in activist circles and grassroots projects across Europe. This creative arts and research portfolio in CreaTures is complemented by two non-for-profit organisations with special domain knowledge: Sniffer (UK) contributes expertise in brokering between creative practitioners and policy makers / implementers; OKFI (FI) focuses on the application and development of open knowledge and systems thinking.

The rich, interdisciplinary expertise with creative approaches to transformation and sustainability engendered by the consortium is further extended by the CreaTures Advisory Board and various external collaborators who support the project processes in multiple ways, especially through the development of CreaTures ExPs (details of external collaborators are provided below, in sections 2.1 and 2.3). The Advisory Board involves four members: Hilary Jennings is a Trustee of the Transition Network and Director of the Happy Museum Project, working across the arts and cultural sectors. Isabelle LeGalo is a mathematician, philosopher and director of the Carasso Foundation, a French-Spanish philanthropic organization fostering networks for food sovereignty and citizens art. Marjo Mäenpää is the director of Foundation for Cultural Policy Research and CUPORE – Center for cultural policy research in Finland. Špela Petric is a new media artist trained in the natural sciences (PhD in biology), working in the field of art/science/technology (Ars Electronica Award winner). In December 2021, the consortium was joined by Mianna Meskus – Associate Professor in Sociology at Tampere University (TAU) whose research contributes to interdisciplinary studies on knowledge production, technologies and valuation regarding health, biomedicine, gender, and embodiment; particularly from the perspectives of biopolitics, bioindustrialization, feminist new materialism, and speculative futures.

1.3 The purpose of this deliverable

The purpose of this deliverable D3.2 Experimental Productions Roadmap v2 is to outline the production and implementation activities related to the CreaTures experimental productions (ExPs). The key part of the deliverable is the Attachment 1 – ExPs Timeline that provides an overview of all the existing and upcoming ExPs (i.e. those that were completed; are in progress; or scheduled for implementation) and serves as an entry point for all consortium members to plan and coordinate their research activities around each ExP. The ExPs Timeline has also been published on the CreaTures website and made publicly available: <https://creatures-eu.org/timeline/>. This deliverable D3.2 is an updated version of the D3.1 Experimental Productions Roadmap v1 that was first submitted in June 2020 and re-submitted in September 2021, upon review.

1.4 How this deliverable was produced

This deliverable was produced by researchers from WP3 in collaboration with all CreaTures partners who have contributed their ExPs to the project. Since M3, WP3 researchers have had regular conversations with all ExPs authors to discuss their evolving ExP plans and strategies, including mitigation measures related to the Covid-19 pandemic (details available in D3.1). The latest round of one-on-one conversations with all ExPs authors took place in November - December 2021. The focus was on collecting updates from the ExPs production and implementation, resulting in updated ExPs descriptions on the project website and in updated ExPs Timeline. These details for each ExP are reported in this deliverable and reflected in the ExP Documenting Template (internal document available to all consortium members in the shared Teams workspace; details available in D3.3). The

ongoing ExPs developments have been further discussed at the regular bi-weekly meetings of the CreaTures Research Fellows (RF) as well as at the monthly meetings of the CreaTures Executive Board (EB). A three-day RF meeting held in-person in Utrecht (NL) in November 16th - 19th, 2021 has contributed important insights into the overall facilitation of ExPs research processes. Researchers from across all WPs have thus contributed their inputs and comments.

This deliverable further draws on the insights from the ExPs Data & Analysis workshop organised at the third CreaTures Plenary (September 28th, 2021) where ExPs authors and researchers got together to discuss the existing data collected from each ExP's production, implementation and audience engagement. The discussion further focused on future plans and practitioners' wishes regarding the insights they would like to get from the ExPs research analysis. The workshop helped us to distill several key areas of focus for the future ExPs research (including, for instance, the focus on how ExPs grow relational networks and new more-than-human collectives), which has contributed to the ongoing creation of the Open Creative Practices Framework (workshop details are available at https://miro.com/app/board/o9J_lxHzm_M=/).

2. CreaTures Experimental Productions (ExPs)

At the time of this deliverable submission (M24) we have 20 ExPs in place: seven of them are completed (in terms of implementation), ten are in progress, and three are currently being commissioned and expected to start production in January 2022.

The CreaTures ExPs are art and design projects set up as temporary co-creative spaces that can mobilize specific forms of artistic knowledge and provide safe collaborative environments for multi-stakeholder interaction to support positive societal transformation. ExPs developed and deployed in CreaTures are embedded in different communities and urban contexts, covering different scales and scopes. Some are large scale – for instance, immersive public installations engaging people's senses to explore how ways of life can be touched, transformed and reinvented. Some are of medium scale including, among others, multi-stakeholder gaming sessions and performative events that can be achieved with modest resources. Others are smaller and presented as or within community happenings, festivals and art/design conferences, for instance in the shape of co-creative design workshops, courses, and small game sessions.

While formally distinct, all CreaTures ExPs work across eco-social concerns – dealing with interrelated domains of ecological and social sustainability and acknowledging that climate and ecological sustainability goals will only be attained by addressing social sustainability issues (Randers et al., 2018). In CreaTures, we use the shorthand term 'eco-social' (see Dolejšová et al., 2021; further details are available in D2.3) to reflect this interrelatedness and acknowledge that creative works exploring sustainability as a topic should connect issues of social justice, cultural diversity and ecological issues (Kagan, 2008; Moore and Milkoreit, 2020). The scope of eco-social themes addressed by the CreaTures ExPs is diverse, including human health and wellbeing, communing and governance, forest management, and sustainable food systems and practices. The ExPs are open for interaction by members of the public and/or specific communities. Within the CreaTures project, the ExPs are accompanied by related engagement activities, such as seminars, panel discussions, workshops, art jams and travelling exhibitions that aim to engage publics in locally-specific ways conducive to understanding the local-global relations inherent to eco-social sustainability. The ExPs and accompanying activities produce rich data allowing us not only to compare the different creative practices mobilized, but also distill key methodological lessons.

2.1 Interdisciplinary approach to ExPs development

The CreaTures consortium brings together many forms of knowledge and expertise to consider transformation processes. Close collaboration among experts from diverse areas of sustainability research and creative practice – including artists, designers, researchers, social and natural scientists – is vital for the CreaTures ExPs processes. The ExPs are developed in interdisciplinary settings, utilising diverse methods and approaches drawn from experimental and participatory design, socially oriented art, cultural mediation, social change action, sociology, urban studies and sustainability science. The research methodology followed by the CreaTures project is explained in detail in D2.1 and further discussed in D2.2 and D2.3. In this deliverable D3.2, we focus specifically on practical details related to ExPs' production and implementation.

The ExP are developed by different groups of co-authors. Each ExP authors' group involves at least one CreaTures consortium partner primarily responsible for the ExP production and implementation, and a varied number of external collaborators contributing to the ExP development with their distinct thematic expertise. Details of co-authors identified for each ExP so far are provided on the CreaTures website, in each ExP's entry. These co-authors' details are not final at this point (M24) as many of the ExPs are still in progress. The involvement of CreaTures partners as ExPs co-authors differs from case to case: in some ExPs, partners act as creative practitioners responsible for the creative development of the ExP's concepts, processes and artifacts (e.g., Open Forest ExP co-authored by the consortium partners at Aalto and RMIT together with various external collaborators). In other cases, partners have the role of curators commissioning and supporting ExPs developed by external creative practitioners (e.g., MyCoBiont ExP where the consortium partner Kersnikova acts as a curator commissioning creative work from various artists working with fungi).

In all cases, ExP co-authors are responsible for self-documenting their ExP, using a shared documentation template (details in D3.3). Critically, all ExPs are supported by CreaTures researchers across work packages throughout the time of their production and implementation: for instance in terms of research methodologies development and data collection (details in D2.1), evaluation (details in D4.1 and D4.2), organisation of ExP-related engagement events (D5.1), and facilitation of ethics procedures (D6.1 and D6.2). All ExPs are further discussed at regular consortium meetings, where consortium members provide feedback to each other and comment on the evolving ExPs processes. The accompanying public-facing engagement activities, where ExP authors invite relevant experts to discuss or otherwise engage with the themes and issues related to their projects, provide a further occasion for the ExPs to gather insights from thematic experts from outside of the consortium.

It is important to note that most members of the CreaTures consortium maintain composite identities of some sort, having expertise both as academic researchers and creative practitioners. Many consortium members have a dual role in overseeing or supporting research activities in the work packages and, at the same time, developing their own ExPs as creative practitioners. These hybrid roles of CreaTures consortium members contribute to the interdisciplinary character of ExPs development, enabling for diverse knowledges and expertise to come together in each ExP case. These co-creative ways of working together, where creative practitioners are treated equitably as co-researchers rather than merely research subjects, is at the heart of the CreaTures project.

2.2 Overview of existing and planned ExPs

This section provides a list of twenty CreaTures ExPs that have been in place in M6-M24. For a visual overview of key ExPs activities and dates, see the Attachment 1 – ExPs Timeline. The Table 1 below summarises details for each ExP, including links to the ExPs' entries at the CreaTures website. The web entries include detailed descriptions of the ExPs' scopes, eco-social themes and goals, and

audience engagement formats as well as ExPs timelines and locations, details of the ExPs' authors and collaborators, and selected visual materials. All these materials were updated in December 2021.

Table 1 - overview of CreaTures ExPs

ExP Title	Authors	Status	Link
Experimental Food Design for Sustainable Futures	Feeding Food Futures (led by Aalto)	Completed	https://creatures-eu.org/productions/food-futures/
Nocturne	Isabel Beavers (Aalto commission)	Completed	https://creatures-eu.org/productions/nocturne/
Cyano Automaton	Agnieszka Pokrywka (Aalto commission)	Completed	https://creatures-eu.org/productions/cyano/
Refuge for Resurgence	Superflux	Completed	https://creatures-eu.org/productions/refuge/
Invocation for Hope	Superflux	Completed	https://creatures-eu.org/productions/invocation/
reProductive Narratives	Kersnikova	Completed	https://creatures-eu.org/productions/rn/
Baltic Sea Lab	Juli Lohman (Aalto)	Completed	https://creatures-eu.org/productions/baltic-sea-lab/
Open Forest	Open Forest Collective (Aalto + RMIT)	In progress	https://creatures-eu.org/productions/open-forest/
Gaming for the Commons - CommonsPoly	ZEMOS98	In progress	https://creatures-eu.org/productions/commonsPoly/
Hackcamp	ZEMOS98	In progress	https://creatures-eu.org/productions/hackcamp/
The Hologram	Furtherfield ft. Cassie Thornton & Lita Wallis	In progress	https://creatures-eu.org/productions/the-hologram/
The Treaty of Finsbury Park 2025	Furtherfield ft. Cade Diehm	In progress	https://creatures-eu.org/productions/treaty/
Glossary	Amira Hanafi (RMIT commission)	In progress	https://creatures-eu.org/productions/glossary/
Sustainability Futures Game	Hellon	In progress	https://creatures-eu.org/productions/sfg/
MyCoBiont	Kersnikova	In progress	https://creatures-eu.org/productions/mycobiont/
Gillatant	Kersnikova	In progress	https://creatures-eu.org/productions/gillatant/
Pixelache	Andrew Gryf Patterson (Aalto commission)	In progress	https://creatures-eu.org/productions/pixelache/
Open Urban Forest	Michal Mitro (RMIT-EU commission)	Confirmed, starts in 2022	not published yet; overview below

The Fallen Clouds	Josefina Buschmann, Daniela Camino, Nicole L'Huillier, Melisa Miranda, Francisca Sáez (RMIT-EU commission)	Confirmed, starts in 2022	not published yet; overview below
On the Ground	To be selected (UoS commission)	Confirmed, starts in 2022	not published yet; overview below

Overview of ExPs starting in 2022

I. Open Urban Forest

Beneficiary:

RMIT-EU (subcontracting)

Authors:

Michal Mitro (subcontracted via tendering process)

Status:

Author selected and confirmed. ExP is now in the contract signing stage.

Scope (S/M/L):

Small

Format:

Participatory events

Thematic Focus:

Open Urban Forest is conceptualising and exploring certain eco-social stacks of human and more-than-human affairs, their politics and poetics, in the context of Garden – a lot of six communal gardens in the Jundrov district of Brno in Czechia. Michal Mitro will invite and curate the work of five groups and experts that will explore what this stack of meanings, entities and materials means to them and will produce an output of their choice ranging from academic text or essay, through performative or sonic intervention, relational site-specific work and artistic or speculative objects or scenarios. The ExP investigates the diverse scales of human eco-social impact on natural ecosystems and aims to produce reflective narratives contemplating how human-nature entanglements can be arranged otherwise to be sustainable, regenerative, and mutually nourishing.

Location:

Czech Republic

Target audience group:

Members of the public, broadly

Timeline:

January - June 2022

II. The Fallen Clouds

Beneficiary:

RMIT-EU (subcontracting)

Authors:

Josefina Buschmann, Daniela Camino, Nicole L'Huillier, Melisa Miranda, Francisca Sáez
(subcontracted via tendering process)

Status:

Authors selected and confirmed. ExP is now in the contract signing stage.

Scope (S/M/L):

Large

Format:

Installation comprising of 3 material-sonic fragments and 3 film projections

Thematic Focus:

The Fallen Clouds is a speculative storytelling research-based project that delves into the socio-environmental impacts of digital infrastructures to break the great myth of cloud computing through situated spells casted in Chile. It consists of a polyphonic and tactile installation composed of 3 material-sonic fragments and 3 film projections, each one connected to one of the three territories explored and the myths related to them. Filming will take place in three in critical digital zones in Chile: the submarine Internet cable in Valparaíso, Google's data centers in Quilicura and Cerrillos, and the carbonate plants of lithium in the Atacama salt flat. The ExP explores and reflects on the damaging impacts of extractivist capitalistic practices on the life on Earth.

Location:

Chile

Target audience group:

Members of the public, broadly

Timeline:

January - June 2022

III. On the Ground

Beneficiary:

University of Sussex (subcontracting)

Authors:

not selected yet; to be subcontracted via tendering process

Status:

In the last stage of selection process

Scope (S/M/L):

Medium

Format:

TBC

Location:

TBC

Target audience group:

TBC

Timeline:

January - June 2022

Thematic Focus:

We cannot bring about sustainable futures without addressing questions of inequality, since the impacts of unsustainable systems often tend to fall heaviest on the marginalised. At the same time, sustainability-related fields have not always been responsive to the experiences of those who face various forms of marginalisation - whether that's through holding a different race, gender identity, sex, and / or class—or those with experiences of economic precarity, place-based marginalisation or trauma survivor-hood (though this is now rapidly changing). Our 'On the ground' Call for Tenders has opened a space for those working from (or with) communities that consider themselves to be marginalised to reflect on the intersections between sustainability and equality in the context of long-term, place-based work. At the time of writing, the UoS team have shortlisted two tenders: Yarmouth Springs Eternal, is an established project based in the UK working with individuals who have experienced homelessness and migration. Participants work with artists to develop walking tours of local green spaces. View from the Window is a project that explores the relationship of an artist-run space with its near neighbours in Poland, with a focus on inclusive artworks, events and conversations that bring people together across differences at a time of polarisation, including around a community urban green space.

3. Future plans

All ExPs, including those that are yet to be commissioned, are set to be finalised well before June 2022 (end of the WP3 - Laboratory activities). A detailed schedule with concrete production and implementation dates for each ExP is available in the ExP Timeline appended below in the Annex I. and also in the online, public version available at <https://creatures-eu.org/timeline/>. Both timelines will be updated regularly throughout the remaining six months of the Laboratory (M25-M30) to reflect the ongoing ExPs developments.

References

Markéta Dolejšová, Cristina Ampatzidou, Lara Houston, Ann Light, Andrea Botero, Jaz Choi, Danielle Wilde, Ferran Altarriba Altarriba Bertran, Hilary Davis, Felipe Gonzales Gonzales Gil, and Ruth Catlow. 2021. Designing for Transformative Futures: Creative Practice, Social Change and Climate Emergency. Creativity and Cognition. Association for Computing Machinery, New York, NY, USA, Article 3, 1–9. DOI:<https://doi.org/10.1145/3450741.3465242>

Sacha Kagan. 2008. Introduction: Sustainability: A New Frontier for the Arts and Cultures, in eds Kagan, Sacha and Volker Kirchberg, eds. Sustainability: A New Frontier for the Arts and Cultures. Higher Education for Sustainability 3. Frankfurt am Main: VAS, 2008. 14-23.

Ann Light, Ruth Wolstenholme, and Ben Twist. 2019. Creative practice and transformations to sustainability – insights from research. SSRP Working Paper No1, Sussex Sustainability Research Programme, Sussex University.

Michele-Lee Moore and Manjana Milkoreit. 2020. Imagination and Transformations to Sustainable and Just Futures. *Elementa: Science of the Anthropocene* 8, 1 (December 2020).
<https://doi.org/10.1525/elementa.2020.081>.

Jorgen Randers, Johan Rockström, Per Espen Stoknes, Ulrich Golüke, David Collste, and Sarah Cornell. 2018. Transformation is feasible: How to achieve the sustainable development goals within planetary boundaries. A report to the Club of Rome, for its 50 years anniversary, 17.

Annex I

ExPs Timeline

The timeline is a living document shared with all consortium members that is being updated regularly, according to the latest ExPs developments. NB: Zoom in for better visibility.

The ExPs Timeline can also be viewed in the internal Teams workspace at:

<https://aaltofi.sharepoint.com/:x:/s/CreaTuresH2020Project/EdiwXuRns4hFmU2KY-Rl8HQBHu2avJmcTpPYeggEN4XQbw?e=AnCCgQ> or provided separately upon request, as an .xls file.

Calendar	OneTures WPs	ExP in progress (production/implementation)	ExP continued (project in production)	ExP completed						Medium ExPs (3)					Large ExPs (2)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															
31															
32															
33															
34															
35															
36															
37															
38															
39															
40															
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															
51															
52															
53															
54															
55															
56															
57															
58															
59															
60															
61															
62															
63															
64															
65															
66															
67															
68															
69															
70															
71															
72															
73															
74															
75															
76															
77															
78															
79															
80															
81															
82															
83															
84															
85															
86															
87															
88															
89															
90															
91															
92															
93															
94															
95															
96															
97															
98															
99															
100															

