Dissemination and Outreach Plan

May, 2018

We plan a series of dissemination activities and will target the following audiences: researchers and innovators in academia and industry; managers, decision makers, and standardisation bodies; students; informed public in general. The main dissemination measures are the project website, scientific publications with open access, open-source software under which developed techniques will be made available, presentations and training activities. All ESRs will be involved in these activities.

Project website: This will be our primary channel for general dissemination throughout the programme lifetime. It will start with the open positions, doctoral training programme and objectives, beneficiaries, partners, and other information, followed by updates on research progress, mid-term and final project reports, results, and links to published research papers. An event overview with a mailing list service will be provided that informs about upcoming conferences where ECOLE results are presented and announces the ECOLE symposia and career events.

Scientific publications with open access: The main channel for scientific dissemination is publishing research papers by ESRs in international peer-reviewed journals. Being a multi-disciplinary project, ECOLE naturally addresses several research communities, such as evolutionary computation, machine learning, engineering optimisation, heuristic optimisation and advanced data analytics.

The senior members in the ECOLE project will propose and organise special sessions/issues in high-impact international conferences and journals. We are planning the following topics: 1) the interplay between machine learning and optimisation; 2) efficient multiple-criteria optimisation for industrial problems; 3) learning from engineering and social media data in industrial product optimisation.

Open-source software and design tools: To stimulate the dissemination of developed techniques, they will be made available where possible as open source packages for R (www.r-project.org), or benchmark data or design tools on the project website, for other researchers and professionals to download freely. To demonstrate software we will attend trade shows and industrial events.

Presentations at conferences and workshops: All accepted contributions from ESRs will be presented at the conferences, funded by the ECOLE project, and feedback from other researchers working on the related topic will be requested. Meanwhile, the senior researchers in ECOLE are usually involved in the programme and organising committees of many relevant scientific events. It is a good opportunity to present latest published results of ECOLE at these specific conferences and workshops.

International Career events: We will organise two career events in the automotive and ICT sector, open to academia, teachers for secondary or tertiary education and industry. The goal is to popularise and gain feedback on the training programme, to engage additional EU companies and to maximise the ESR career opportunities.

Liaison and cooperation with related projects: Each beneficiary will actively liaise with other current and future European/International training and research projects to collaborate, receive feedback and to maximise the impact of ECOLE.

Social media: With the help of ESRs, we will broadcast our research outcomes and applications through social media (Facebook/LinkedIn/Twitter/Youtube/Slideshare). Project-related videos, such as presentations given at conferences and project demos, will be uploaded to public websites.

Dissemination to the general public: Directed by UoB, we intend to reach the general public by working with Academic Ideas Lab (http://www.academicideaslab.co.uk), which is funded by the Higher Education Innovation Fund (UK) and provides academics and research-based institutions with contacts and know-how to reach very large audiences with the fruits of their research. It matches academics with the best TV and radio producers to develop ground-breaking programmes for both UK and international broadcast. We plan to approach the New Scientist and Economist journalists for a feature article on our research results.

Communication and public engagement are also a core part of ECOLE programme to provide ESRs a richer experience by gaining contacts with companies from different sectors. This maximises the career opportunities for ESRs, increases our research impact on society, and results in broader dissemination of research outcomes to industry. We will act both globally and locally. We have laid out the steps that the beneficiaries will take in the table below.

Table: Communication and public engagement activities

Target audience	Actions & Partners	Description and benefits
General public of all ages	• Thinktank, Birmingham Science Museum • The Public Engagement Working Group (PEWG) • Project research blog • Social media, newspaper and trade magazines, The British Science Festival • Nacht van Kennis en Kunst in Leiden	• PEWG, working with the UK national coordinating centre for public engagement (NCCPE), draws together academic and administrative pioneers, plus professional services such as Marketing & Communications, the Graduate School, Stakeholder Relations and also external advisors such as Thinktank and local Science Museums. PEWG has developed a defined public engagement strategy to outline common understanding and goals to support the great public engagement already happening at UoB, pave the way for more and better engagement by breaking down barriers, and to put public engagement central in academic life. • Develop an ECOLE research blog, hosted by WordPress, to enable public awareness about our research, including audio and video tutorial recordings for the general public. • Flyers and exhibits at the science museums will be pursued as part of our project's public engagement strategy. We plan to promote ECOLE at the British Science Festival and the Dutch 'Nacht van Kennis en Kunst' to connect people with scientists, engineers, technologists and social scientists.
General researchers	• Conferences and journals • Academic/industrial competitions	• Informing research communities about our research/project, through conferences and journals as listed in Section 2.3.1. ESRs are encouraged to join relevant academic/industrial competitions, which can indirectly impact the media with our research outcomes.
University students	• *Original* magazine • Summer schools and workshops	• Collaborating with the UoB's Communication Team to publish clear and relevant articles in the *Original* magazine.

	• MSc in computer science programme	• Inviting people outside the project to contribute their research and knowledge to our activities, e.g. summer schools, workshops and career events. ESRs and researchers in ECOLE will present their results to other university students. • Leiden provides an MSc computer science programme in "Science Communication and Society", which will help our project with dissemination and public engagement by supervising MSc students associated with ECOLE. This involvement can be integrated into their studies e.g. by means of ECOLE-related projects.
School teachers and students	• The Big Bang Fair Near Me programme. • Computer Science department open days at UoB and Leiden. • The network of Computing at School	• The Big Bang Fair Near Me programme is the largest celebration of science in the UK. We will present talks and posters to provide students with insights into ECOLE research. • ECOLE will join the network of Computing at School (CAS -- part of The Chartered Institute for IT in UK) through UoB, provide school teachers with easy-to-understand materials of cutting-edge techniques, and deliver our latest research to school students, **especially in girl schools and mix schools**.