2nd Barcelona Citizen Science Day

Date: 16 April 2015
Schedule: 10:00-19:30
Language: English

Site: Disseny Hub Barcelona
Room C
Pl. de les Glòries Catalanes, 37-38 Barcelona
http://www.museudeldisseny.cat

Organised by: Ajuntament de Barcelona, Institut de Cultura de Barcelona and BarcelonaLab Citizen Science Office; OpenSystems from Universitat de Barcelona.

Hashtag for Twitter: #CitSciBCN #NOVUM2015
Twitter account: @CCiutadana

Live graphic reporting: Verity Harrison (thinkdoodly.com)

The objective of the second edition of the **Barcelona Citizen Science Day** is to consolidate this event as a **reference Open Forum on Citizen Science for the city of Barcelona**. While the past year edition was focused on giving visibility to all the existing projects, this 2015 edition will focus on proposing transversal **tools and methodologies**, applicable to most of the citizen science projects.

The meeting is part of NOVUM (the Barcelona Science, Technology and Innovation Festival) organised by the Direction of Creativity and Innovation of the Institute of Culture of Barcelona (Barcelona City Council).

Participants: Researchers, Students, Science Communicators, Civic actors, Makers and anyone interested in Citizen Science.

Anyone interested should register on line:
http://goo.gl/forms/hJoNmieHBg

Programme

Day-long:

-   **Citizen Science Wishing Wall.** Looking for collaborators for your Citizen Science project? Having special skills and wanting to collaborate with Citizen Science projects? Post it on the Whishing Wall!
-   **Citizen Science Expositor.** Do you want to share diffusion material (flyers, business cards, objects..) of your project with the participants ? This is the place to drop it off.
-   **Discussion.** Do your want to share your views/recommendations with the organizers, give your opinion during the sessions or ask questions to the speakers? Tweet with the hashtags #CitSciBCN and #NOVUM2015 and mention @CCiutadana!

10:00-14:00

10:00-10:15 Welcome of the participants by the organisers and representatives of the organisation.

10:15-10:50 What's new in Citizen Science? Trends and topics.

- **CitSci 2015 International Conference and the new Citizen Science Associations.** *Josep Perelló, Oficina de Ciència Ciutadana and OpenSystems, UB.*

- **Citizen Science in H2020 – Projects and Policies.** *John Magan, Deputy Head of Unit "Digital Science", European Commission.*

10:50-11:50 Ignite Talks #1: European Projects, Open Data and Privacy. *Citizen science project presented in 5 minutes and 3 slides.*

- **Physical Activity through Sustainable Transport Approaches (PASTA)**
  Ione Avila-Palencia, Centre for Research in Environmental Epidemiology

- **Citizens' Observatory for Coast and Ocean Optical Monitoring (CITCLOPS)**
  Alexander Steblin, Barcelona Digital Technology Centre.

- **BeWater: society adapting to Global change**
  Anabel Sanchez, Annelies Broekman, CREAF.

- **RRI TOOLS**
  Daniel García, La Caixa Foundation.

- **Privacy: Citizen Science's next frontier**
  Liliana Arroyo, Eticas Research & Consulting.

- ***OpenBeeResearch***
  Isabelle Bonhoure, OpenSystems (Universitat de Barcelona).

- **Riu.net, an App to assess rivers' ecological status**
  Narcis Prat, FEM Resarch Group, Universitat de Barcelona.

- **ClimaDat: Open Data on Climate Science.**
  Josep-Anton Morguí, Institut Català de Ciències del Clima (IC3).

- **MEDJELLY Mobile Application for jellyfish monitoring**
  Verónica Fuentes, Institute of Marine Sciences (CSIC).

- **Motivating birders for Citizen Science**
  Abel Julien, Institut Català d'Ornitologia.

Chair: Elisabetta Broglio, Institute of Marine Sciences (CSIC).

11h50-12:20 Coffee break.

12:20-12:30 Premi Ciència Ciutadana
Presentation of the **Premi Ciència Ciutadana** promoted by El Temps and the associated web platform, www.eltemps.cat [En català]

Zaida Torregrosa (El Temps).

12:30-14:00 Session #1. Citizen Science and Public engagement.

Description of the public participation/engagement strategy used in some citizen science projects and how they managed to engage a large number of volunteers and/or some specific collectives.

- ***BioBlitzBCN: public engagement, citizen science and biodiversity recording***
  Dacha Atienza, Museu de Ciències Naturals de Barcelona.

- ***Ibercivis, 10 years inspiring citizen science in Spain***
  Fermín Serrano, University of Zaragoza.

- ***Collective Experiments for citizen science***
  Mario Gutiérrez Roig (OpenSystems) and Oleguer Sagarra (Physics and Computation of Complex Systems), Universitat de Barcelona.

Responding speakers from others worlds:

- ***Understanding Data through human acts***
  Dani Llugany, Domestic Data Streamers.

- ***Basurama, engaging the public on the real estate bubble waste***
  Pablo Rey, Basurama, Montera34 and Public Laboratory for Open Technology and Science.

Chair: Frederic Bartumeus, Centre d'Estudis Avançats de Blanes (CEAB-CSIC).

14:00-15:00 Lunch Break

15:00-19:30

15:00-15:10 Barcelona Citizen Science Office: presentation of the Citizen Science Catalogue and the Open Call for new projects.
Isabelle Bonhoure (OpenSystems, Grup Coordinador de la Oficina de Ciència Ciutadana).

15:10-16:40 Session #2. New tools and technologies for Citizen Science Projects.

Description of the innovative tools and/or technologies used some citizen science project and explanation of why they represent a clear breakthrough.

- **CITI Citizens' observatories for community-based**

environmental monitoring (CITI-SENSE)
Tom Cole-Hunter, Centre for Research in Environmental Epidemiology (CREAL).

- **Enlisting citizen-scientists in the war on tiger mosquitoes**
  Frederic Bartumeus, Centre d'Estudis Avançats de Blanes (CEAB-CSIC).

- **Citizen science and Do-It-Together techniques to estimate the quality of seawater**
  Carine Simon, Raul Bardaji, Institute of Marine Sciences (CSIC).

Responding speakers from others worlds:

- **Next Generation Data Mapping with CartoDB**
  Eric Bean, CartoDB.

- **Goteo.org, an open source network for civic crowdfunding and distributed collaboration**
  Enric Senabre, Goteo.org

Chair: Josep Perelló, OpenSystems (Universitat de Barcelona).

16h40-17:10 Coffee break.

17:10-18:10 Ignite Talks #2: New Mobile Applications and Digital Platforms for Citizen Science

Citizen science project presented in 5 minutes and 3 slides

- **Dr. Brain, a game to investigate human behaviour**
  Julia Poncela, Universitat Rovira i Virgili.

- **"Stick out your tongue"**
  Annick Labeeuw, Centre for Genomic Regulation.

- **SeaWatchers**
  Joaquim Garrabou, Institute of Marine Sciences (CSIC).

- **FLOOD_UP**
  Montse Llasat-Botija, Universitat de Barcelona.

- **Km2 Poblenou**
  Mònica Garriga, Itinerarium.

- **OBSEA Observatory**
  Guillem Santamaria Motis, Institute of Marine Sciences (CSIC).

- **Il·lustraciència**
  Miquel Baidal, Il·lustraciència - Assoc. Catalana de Comunicació Científica (ACCC).

- **Wikipedia for Science & Technology**
  Eduard Aibar, Universitat Oberta de Catalunya.

- **The Open Wetlab as a space for biology, art and society**

Maria Bota, WAAG Society.

- **Point of Information on Aerobiology (PIA-XAC)**
  Jordina Belmonte, Universitat Autònoma de Barcelona.

Chair: Aitana Oltra, Centre Estudis Avançats de Blanes (CSIC).

18:10-18:30 Day wrap up, sketching and beers.

- **Presentation of the sketch of the day**
  Verity Harrison, thinkdoodly.com

- **Summary of the main outcome of the discussions**
  Barcelona Citizen Science Office.

18:30-19:30 Keynote Conference
Open to the public [No registration]

Public Lab, a DIY environmental science community

Liz Barry, Co-founder and Director of Community Development at the Public Laboratory for Open Technology and Science

Public Lab is a two-part project -- an attempt at large-scale community environmental monitoring, AND a massively distributed R&D lab for inventing new monitoring techniques and equipment. Any person or organization is welcome to base their own participatory science project in Public Lab's infrastructure. This presentation will provide an orientation to how we work together online and in person, share attribution, learn, and advocate for change -- a process we describe as "community science."

Abstracts

10:15-10:50 What's new in Citizen Science? Trends and topics.

- **CitSci 2015 International Conference and the new Citizen Science Associations.** *Josep Perelló, Oficina de Ciència Ciutadana and OpenSystems, UB.*

A review of the first International Citizen Science Conference (San Jose, USA), held last February, will be presented as well as the emergent trends and topics of the Citizen Science projects presented there. The current status and activity of the two international Citizen Science Associations (CSA-Citizen Science Association; ECSA-European Citizen Science Association) will be detailed.

- **Citizen Science in H2020 – Projects and Policies.** *John Magan, Deputy Head of Unit "Digital Science", European Commission.*

Citizen Science and public engagement is increasing in importance as a component of open research in the digital age. This presentation will consider its role in the European research landscape and identify opportunities for funding under Horizon 2020.

10:50-11:50 Ignite Talks #1: European Projects, Open Data and Privacy. *Citizen science project presented in 5 minutes and 3 slides.*

- **Physical Activity through Sustainable Transport Approaches (PASTA)**
  Ione Avila-Palencia, Centre for Research in Environmental Epidemiology

This project focuses on the systematic promotion and facilitation of active mobility as an innovative approach to integrate physical activity into everyday lives. Seven European cities participate recruiting 2000 participants who should register on a website and complete questionnaires. Subsamples of 50-100 participants will be recruited in selected cities to carry sensors for 1 week to collect objective data*.*

- **Citizens' Observatory for Coast and Ocean Optical Monitoring (CITCLOPS)**
  Alexander Steblin, Barcelona Digital Technology Centre.

The Citclops project aims to develop systems to rapidly capture the optical properties of seawater to help determine its quality and help detect changes in aquatic environments. This is being achieved by using low-cost sensors combined with people (acting as data carriers and providing info through the use of smartphones as sensor), contextual information (e.g. georeferencing) and a community-based Internet platform.

- **BeWater: society adapting to Global change**
  Anabel Sanchez, Annelies Broekman, CREAF.

BeWater aims to enhance problem scoping and solving processes to face global change by developing science and society co-created adaptation plans in 4 Mediterranean river basins. Evidencing the importance and showing practical ways to create conditions for direct and continuous dialogue between citizens and science thus, paving the way to transform current technocratic water management practices through a stakeholder knowledge driven methodology.

- **RRI TOOLS**
  Daniel García, La Caixa Foundation.

The RRI Tools project is compiling a Toolkit of diverse resources to help all actors transform research and innovation into a more responsible, collective, and inclusive effort. Citizen science can provide a wealth of initiatives and resources to this end, as well as request missing tools to be developed by our project. We will present the RRI Toolkit and carefully listen to what you have to add to it.

- **Privacy: Citizen Science's next frontier**
  Liliana Arroyo, Eticas Research & Consulting.

Citizen science relies on people's data -their own personal data, data gathered using personal devices or information available in their surroundings. Understanding the principles and requirements of responsible innovation and taking into account privacy rights (consent, minimisation, purpose limitation) thus become necessary steps for citizen science to fulfill its bottom-up, collaborative, ethical promise.

- ***OpenBeeResearch***
  Isabelle Bonhoure, OpenSystems (Universitat de Barcelona).

This project allows us to provide a frame in which a variety of different disciplines and actors can meet and engage in a satisfactory synergetic work to better know

how a bee colony behaves in an urban context. It aims at uniting scientific experts, artists, and different actors from civil society (e.g. beekeepers, environmentalist, gardeners, architects and policy makers) in collective works, creative activities and research where bees and beehives are the main characters and the city is the scenario.

- **Riu.net, an App to assess rivers' ecological status**
  Narcis Prat, FEM Resarch Group, Universitat de Barcelona.

Riu.net is an app to assess rivers' ecological status with citizens' collaboration. Riu.net is an interactive educative tool that enables to evaluate the ecological quality of river ecosystems. In addition, it provides scientific data that will be available on the website www.RiuNet.net to be consulted by experts, environmental managers and the general public.

- **ClimaDat: Open Data on Climate Science.**
  Josep-Anton Morguí, Institut Català de Ciències del Clima (IC3).

The project ClimaDat (www.climadat.es) is funded by "Obra Social la Caixa" and leaded by The Catalan Climate Science Institution (IC3). Its goal is to furbish Open Data. Scientists giving checked reliable data to Society. Currently, Greenhouse Gases hourly data, in a monthly basis. Everybody should be used to use these Data. They are yours for working on them to learn about them. Would you like using ClimaDat Data?

- **MEDJELLY Mobile Application for jellyfish monitoring**
  Verónica Fuentes, Institute of Marine Sciences (CSIC).

Jellyfish interactions with human activities are manifold, but gelatinous blooms have always a negative feel to most people. In the framework of the Med-Jellyrisk Project, a Citizen Science approach is sustaining a prolonged database on Mediterranean jellyfish records to support the development of mitigation tools, e.g. forecasting or risk maps.

- **Motivating birders for Citizen Science**
  Abel Julien, Institut Català d'Ornitologia.

Birders are enthusiastic about their hobby but although they have quite a long tradition of participation in collective works, how can we engage birders in Citizen Science? For us the clues are socialization, a small dose of competition plus some individual recognition and the recognition of their effort. In Ornitho.cat we have more than 2.500 participants who feed our database with half a million records of bird observations every year.

12:30-14:00 Session #1. Citizen Science and Public engagement.

Description of the public participation/engagement strategy used in some citizen science projects and how they managed to engage a large number of volunteers and/or some specific collectives.

- ***BioBlitzBCN: public engagement, citizen science and biodiversity recording***
  Dacha Atienza, Museu de Ciències Naturals de Barcelona.

A BioBlitz is a collaborative race to discover as many species as possible, within a set location, over a defined time period - usually 24 hours. A BioBlitz usually combines the collection of biodiversity records, as a form of contributory citizen science, with public engagement. Naturalists, scientists and volunteers work together with members of the public and school groups to create a snapshot of biodiversity. This provides an opportunity for participants to learn together and share their expertise and enthusiasm for nature whilst collecting valuable information about the biodiversity.
In 2010, the Universitat de Barcelona and the Barcelona City Council ran the first event in Barcelona. Since then the project has grown and strengthened and now is currently led by the Natural Science Museum of Barcelona, with an important participation of other areas of the City Council, the Association of Friends of the Museum of Natural Sciences of Barcelona and different naturalist associations. Barcelona organizes one event annually. From 2010, a total of 2.083 visitors participated with more than 1,500 species identified.
Outdoor events like BioBlitz can help to break down barriers to engagement with the natural world by providing a structured activity that invites exploration and discovery in a collaborative atmosphere between members of the public, school groups and specialist naturalists.

- ***Ibercivis, 10 years inspiring citizen science in Spain***
  Fermín Serrano, University of Zaragoza.

Over the past 10 years we have gone from making small tests in our offices with desktop grid computing to create a national foundation with leading Spanish research centers and to participate in several European European citizen science projects. Mixing interdisciplinary scientific excellence, technical support and innovative engagement strategies, the Ibercivis Foundation represents both in Spain and in Portugal a consolidated reference with over 40 experiments and 50,000 volunteers from many countries who contribute to professional and amateur researcher purposes. In this presentation, we will revise the main strategic elements in our outreach and inreach plans, from our past learned experiences as well as our future trends to inspire new scientific users and citizen volunteers to join us. With a practical approach covering different models of participation with a wide range of stakeholders, we aim to rethink the concept of to-do list in citizen science, as we have learned that measures that maximize the impact in one scenario do not work for other scenario. Some examples of projects to be reviewed in this talk are: national-european level federation of resources, digital artistic & science experiments, educational virtual spaces, local makers equipments as well as policy makers-oriented communication activities.

- ***Collective Experiments for citizen science***
  Mario Gutiérrez Roig (OpenSystems) and Oleguer Sagarra (Physics and Computation of Complex Systems), Universitat de Barcelona.

Several collective experiments in public spaces of Barcelona under certain concrete situations will be described and discussed. We have used digital devices to create crowd-sourced data aimed to answer specific questions in the context of non-permanent or pop-up experiments on human mobility and human decision making through games. The human mobility experiments, called Bee-Path include monitoring of GPS traces in a park during a Science Fair and camera-tracked motion in the exhibition room of a museum. We have also explored human decision strategies through three different games organized during the three editions of the Board Game Festival.

By following a two-fold approach to the problems treated, we will open the toolbox of these initiatives taking into their own particularities. The common strategy behind these experiments, related to collective experiment concept and the adaptability of the research to urban real scenarios will be detailed. The conceptual frame, aligned to research policies at different levels asking for transparency, responsible and ethical practices or privacy granted data acquisition, will also be described. The "Open Science" principles adapted in this case to open software and data as well as participants awareness will be commented.

Responding speakers from others worlds:

- ***Understanding Data through human acts***
  Dani Llugany, Domestic Data Streamers.

Data changes the way we see our world. We can learn more from ourselves and nature surrounding us than ever before in human history. For this reason, we need new tools to reach and translate this information into a universal language. Domestic Data Streamers is a team of developers that have taken on the challenge of transforming raw data into interactive systems and experiences. The team was created in October 2013 and since then has been working designing and developing interactive data installations for several national and international museums, companies and cultural institutions including the CCCB, Smart City Expo or Qatar Foundation.

- ***Basurama, engaging the public on the real estate bubble waste***
  Pablo Rey, Basurama, Montera34 and Public Laboratory for Open Technology and Science.

In this presentation we will describe a wide range of projects developed by Basurama related to engaging with the public and to visualizing the amount of waste we buy and generate. Basurama has focused part of its research in a special kind of waste: the effects of the real estate bubble in Spain. This last economic expansion period has increased the use, and miss-use, of land, linking housing prices, large urban operations, and serious environmental an climatic problems. We will review different strategies of public participation (successes and failures) and the on-going collaborative process (cadaveresinmobiliarios.org) to create a database to document all the infrastructures (buildings, urbanizations) left abandoned after the real estate bubble in Spain.

15:10-16:40 Session #2. New tools and technologies for Citizen Science Projects.

Description of the innovative tools and/or technologies used some citizen science project and explanation of why they represent a clear breakthrough.

- **CITI Citizens' observatories for community-based environmental monitoring (CITI-SENSE)**
  Tom Cole-Hunter, Centre for Research in Environmental Epidemiology (CREAL).

The CITI-SENSE project aims to create Citizens' Observatories (COs) for engaging citizens, authorities and policy-makers (as stakeholders) and empower them to address urban environmental health issues, such as air pollution, noise and thermal comfort. The project is based in Barcelona and eight other cities, which have piloted environmental sensor-enabled, health-relevant information systems in schools and public spaces. The main study is increasing the quantity and quality of environmental sensor nodes deployed with different stakeholders. Data collected from these nodes contribute to value-added services such as time-activity exposure profiles and location-wide air quality maps. The former are created with personal sensor packs (PSPs) monitoring air quality and the CitySense smartphone app collecting geolocation and accelerometry data. The PSP automatically and wirelessly transmits encrypted data to the smartphone via Bluetooth, which is then relayed to the project's dedicated Web Feature Service via GSM for processing and private access. The city-wide models of air quality, using data from static sensor nodes and de-identified PSPs, will be produced based upon dynamic data fusion techniques. These maps will be available to the public online and used by the CitySense app for exposure profiling of individuals without a PSP. Participatory evaluation will gather qualitative data on the participatory process with stakeholders to assess the feasibility and longevity of COs.

- **Enlisting citizen-scientists in the war on tiger mosquitoes**
  Frederic Bartumeus, Centre d'Estudis Avançats de Blanes (CEAB-CSIC).

We combine citizen scientists' reports from the Atrapaeltigre project with unique data sets from official mosquito surveillance programs to evaluate the characteristics and determinants of the Aedes albopictus invasion in Spain and to lay the groundwork for a low-cost early warning system that could be implemented in mosquito-affected areas all over the world. We employ a Bayesian statistical framework to analyse data gathered and validated by both scientists and "crowd-sourced" volunteers in order to improve existing maps of tiger mosquito distribution in Spain and better understand the socio-environmental risk factors related to its dispersal. Our approach makes it possible to implement a system for real-time detection and alerts that can be used by mosquito control services and policy-makers to improve current approaches to mosquito management.

- **Citizen science and Do-It-Together techniques to estimate the quality of seawater**
  Carine Simon, Raul Bardaji, Institute of Marine Sciences (CSIC).

One way of getting a better knowledge of the sea and its constituents is to use its optical properties. Intuitively if a water is more transparent it is cleaner which means it contains less particles. The particles present into the sea are not necessarily harmful, they can be useful on the contrary, but their presence gives precious information on the ecosystem. The marine water and even more the coastal areas are a very dynamic system so it is important to get a big volume of data in widespread areas. With this idea in mind, within the European FP7 Citclops

project, we have developed 2 techniques to estimate the transparency of the water: one uses voluntary divers who will take some pictures of two small targets. We created an algorithm able to detect the figures of interest and process them to give an estimation of the transparency. The other one is a homemade buoy with a set of sensors. Groups of citizens can build their own buoy. Marine citizens are in charge of the maintenance of the buoy and the collecting of the data. These procedures will allow to generate large data sets, mainly on coastal areas, that could not be easily obtained by conventional observation methods. We will thus be able to get information on the constant evolution of the water transparency in the coastal regions, the most complex ones from the optical point of view, but of interest for many areas such as health, environment, fishing or leisure.

Responding speakers from others worlds:

- **Next Generation Data Mapping with CartoDB**
  Eric Bean, CartoDB.

The insights that can be gained from the massive amounts of data being collected nowadays are profound. As more and more of these data become spatially aware, the geospatial aspect of big data analysis becomes increasingly important. CartoDB allows you to perform big data analysis in a geographic context, allowing you to plot your data on a map in order to create powerful, dynamic visualizations. You can use these visualizations to tell illustrative stories with your data or perform dynamic analyses in order to drive business decisions.

- **Goteo.org, an open source network for civic crowdfunding and distributed collaboration**
  Enric Senabre, Goteo.org.

Goteo.org is an open source network for civic crowdfunding and distributed collaboration (services, infrastructures, microtasks and other resources) for encouraging the independent development of creative and innovative initiatives that contribute to the common good, free knowledge, and open code. Goteo's history, mission and commitment with open source and open data initiatives based on citizens participation will be presented, as well as examples of how new initiatives driven by bottom-up processes are using crowdfunding not only to become reality, but also for spreading formulas and engaging more people.

17:10-18:10 Ignite Talks #2: New Mobile Applications and Digital Platforms for Citizen Science

Citizen science project presented in 5 minutes and 3 slides

- **Dr. Brain, a game to investigate human behaviour**
  Julia Poncela, Universitat Rovira i Virgili.

Dr. Brain is a collective experiment to study how people make decisions when facing an opponent and different possible actions (and different corresponding rewards), a very interesting and open problem in social sciences. Game Theory assumes that people behave in a rational way (which means that they are motivated by the maximization of their own benefits), but does this always happen? With the data provided by more than 500 participants we are trying to help answer this question.

- **"Stick out your tongue"**
  Annick Labeeuw, Centre for Genomic Regulation.

"Stick out your tongue" is a citizen science project coordinated by the CRG, in collaboration with CREAL and the "la Caixa" Foundation. It started 6 months ago, so we are still at the beginning of the process, reaching the middle term. We would like to present some positive side effects, we are experimenting at the organization level: motivation for scientific staff and administration support, deadlines respected, or saying in other words why we love to do citizen sciences project so far.

- **SeaWatchers**
  Joaquim Garrabou, Institute of Marine Sciences (CSIC).

Seawatchers (www.seawatchers.org) is a citizen science project focused in establishing the current health status of the ocean and promote initiatives to reverse the current degradation trend of the Mediterranean Sea. The project's ambition is to convey the potential of observation and take advantage of the knowledge of the citizens of the diverse groups that interact with the sea. The project is conceived as a platform for projects dedicated to the observation at large-scale and long-term.

- **FLOOD_UP**
  Montse Llasat-Botija, Universitat de Barcelona.

The role of citizen science in floods or other natural hazards research is growing in importance in the last years. FLOOD_UP Project invites citizens to share their knowledge about floods (pictures of damages, high water marks,....) through a mobile application and a web space. This information will be very useful to know the impacts and perceptions of floods. The project also aims to improve the knowledge and awareness of population about floods and heavy rains and the science behind them.

- **Km2 Poblenou**
  Mònica Garriga, Itinerarium.

km2 Poblenou is an educational, journalistic, scientific and public management initiative. An innovative platform that brings together a wide range of technologies, such as GPS and mobile devices, geolocation, sensors, open data, and new media content such as voice, text, still image, video and games, allowing data to have all the attributes of the digital. In one single platform, data can be created, copied and shared, almost infinitely, massively, geolocatedly and in real time.

- **OBSEA Observatory**
  Guillem Santamaria Motis, Institute of Marine Sciences (CSIC).

With the objective of tracking fish assemblage changes, we are asking citizens to fulfill a biodiversity survey, helping to classify and count fishes within images and footages obtained from the OBSEA video-observatory of Vilanova i la Geltrú. We implemented a protocol for the web-based species identification supervised by scientists. The obtained data will be validated and studied in order to relate the fish assemblage changes with meteorology and species intrinsic temporal behaviors.

- **Il·lustraciència**
  Miquel Baidal, Il·lustraciència - Assoc. Catalana de Comunicació Científica (ACCC).

In the talk I will present the results of the project Il·lustraciència, that we are organizing the third edition. In the previous one, there were more than 300 illustration participating from different countries. The project is possible thanks to the citizens and professionals who are participating in it.

- **Wikipedia for Science & Technology**
  Eduard Aibar, Universitat Oberta de Catalunya.

Our project is aimed at fostering the active contribution of university students in improving or creating scientific content in Wikipedia. Based on a survey to all faculty members in two Catalan universities, we have developed a Best Practice Guide for university lecturers to design teaching assignments which involve improving Wikipedia articles in Science & Technology issues.

- **The Open Wetlab as a space for biology, art and society**
  Maria Bota, WAAG Society.

The Open Wetlab focuses on life sciences and the design and ethics of life, offering a meeting platform for designers, artists, engineers, scientists, policy makers and the public. The Open Wetlab investigates how art and science can work together by promoting the production of bio-art. Projects like the BioHack Academy and the Smart Citizens Lab teach how to grow biomaterials, to fabricate laboratory hardware and how to make tools and applications to explore and understand the world around us.

- **Point of Information on Aerobiology (PIA-XAC)**
  Jordina Belmonte, Universitat Autònoma de Barcelona.

The Point of Information on Aerobiology (PIA-XAC) focuses on the study of the airborne pollen and spores and their allergens. It offers a public service informing on the biological air quality (http://lap.uab.cat/aerobiologia/).
"Flora urbana i al·lèrgia, cooperes?" is a Citizen Science project where participants collaborate providing data through a mobile app about the ornamental plants present in their surroundings that can generate allergies and their phenological phase.