

Final Project Report (to be submitted by 20th September 2018)

Instructions:

- Document length: maximum 10 pages, excluding this cover page and the last page on project tags.
- We welcome the submission of Annexes (i.e. bachelor or master thesis, references, species lists, maps, drawings, pictures) to further HeidelbergCement's understanding and future use of your findings, however they will not be reviewed by the Jury, and we kindly ask for these to be sent separately to the National Coordinators.
- Please use the attached template for species data collected during the project and submit with the project report.
- Word/PDF Final Report files must be less than 10 MB.
- If you choose to submit your final report in your local language, you are required to also upload your final report in English if you wish to take part in the international competition.
- To be validated, your file must be uploaded to the [Quarry Life Award website](#) before **20th September 2018** (midnight, Central European Time). To do so, please log in, click on 'My account' / 'My Final report'.
- In case of questions, please liaise with your national coordinator.
- **You should not publish additional private information in your final report (e.g.: address, day of birth, email-address, phone number), just complete the categories we ask for below under "Contestant profile".**

The final reports should comprise the following elements:

For research stream projects:

- Abstract (0,5 page)
- Introduction :
 - For projects that are building upon a previous project, write a summary of actions that were already completed in the previous project.
 - Project objectives
- Methods: a detailed description of the methods used during the project is required.
- Results: the results of the project should be outlined and distinguished from the discussion.
- Discussion:
 - Results should be analysed and discussed with reference to region/country taking into account other publications.
 - Outline the added value of the project for science and for the quarry / company.
 - Recommendations and guidance for future project implementation and development on site is requested. Where possible, please mention the ideal timing and estimated costs of implementation.
- Final conclusions: a short summary of results and discussion.

For community stream projects:

- Abstract (0,5 page)

- Introduction
 - For projects that are building upon a previous project, write a summary of actions that were already completed in the previous project.
 - Project objectives
 - A short description of the site and the team members and the targeted audience of the project.
- Actions and activities: a detailed description of planned or implemented actions and outreach activities done to elaborate the project, list of stakeholders involved.
- Discussion:
 - Project teams should discuss the pros and contra and illustrate experiences.
 - Outline the added value of the project for biodiversity, the society and the quarry / company.
- Deliverables: practical implementation and development recommendations of the project are required. Where possible, please mention the ideal timing and estimated costs of implementation.
- Final conclusions: a short summary of the project findings and discussion.

1. Contestant profile

▪ Contestant name:	Antonio Maggioni
▪ Contestant occupation:	IT Project Manager
▪ University / Organisation	Consulta Comunale delle Associazioni di Calusco d'Adda
▪ Number of people in your team:	13

2. Project overview

Title:	Sports, walks, photos and technology to discover the biodiversity of Monte Giglio
Contest: (Research/Community)	Comunity
Quarry name:	Monte Giglio

Abstract (max 0.5 page)

Disclose and promote the biodiversity present in the quarry of Monte Giglio among the citizenship of Calusco. The awareness of the particular biodiversity typical of the quarry will spur the citizen motivation to its protection.

The idea takes its cue from the cycle lane built around the southern, sub-western border of the Monte Giglio quarry and it is developed around it.

The track is attended by citizens of all ages and appeals to a large pool of people for the practice of sporting activities or for simple walks. Therefore, it can represent ideally the "main gate" for the discovery of the biodiversity that is widespread in the quarry environment.

It is proposed to set up along the track a series of information banners about what is "behind the fence", including:

- photographs of:
 - quarry environment
 - connections with the landscape
 - aerial views
 - some historical images
 - wetlands
 - flora
 - fauna
 - waterways outside the quarry but fed from the quarry itself (Torrente Grandone)
 - recovery and refurbishment
- representation of the flora and fauna that found their natural habitat in the quarry and that would never have inhabited the original area
- QRcodes present on the banners linking to web pages with videos, photographs and documents on the biodiversity of the place following up the information on the panels. The panels should intrigue the citizens to deep the topic
- Some definitions of the term "biodiversity"

The panels are completed by some suggestions for the practice of physical workouts that can be carried out on the path.

Final report (max 9 pages)

- **Introduction:** the *Consulta delle Associazioni* is made up of 28 voluntary associations operating in the community of Calusco d'Adda, engaged in social commitment, sporting, cultural and leisure activities, addressed to people of all ages. With the participation in the Quarry Life Award 2018 the *Consulta* desired to pay attention to the territory in a different way; through the collaboration with Italcementi, it's aiming for a deeper knowledge and awareness of the extractive activity and the consequent modification of the environment. The *Consulta* involves exclusively volunteers with different professional and / or scholastic backgrounds; the project was elaborated in a very simple way, whose goals are developed around the desire to spread the theme of biodiversity in a simple and (hopefully) captivating way. Thus, the content of the final report is also characterized by simplicity.
 - **Project goals:** increase awareness of the importance of biodiversity existing in the quarry thought new tools and educational activities to build a relationship between quarries and local communities.
 - **A short description of the site and the team members and the targeted audience of the project:** the Monte Giglio quarry in the last 50 years has been one of the characteristic symbols of Calusco. At first, it was a small hill, with marl extraction and storage facilities in sight overlooking the country. Over the time, mining has transformed the hill into a huge crater properly masked by embankments and vegetation. Recently, in the southwest part of the quarry nearby the Calusco residential areas, Italcementi built a cycle path revamping some areas adjacent to the track itself. The cycle path is a fundamental component of the project for our team. The team is composed on a voluntary basis by some members of the board of the *Consulta* and university students: they were interested in the project for their specific academic preparation or were motivated by the will to deepen the knowledge of this particular part of our territory teaching what they learned to the community. One of the fundamental components of our project is represented by the photo shootings. The "*Circolo Fotografico di Calusco*" was thus involved: it is an association, member of the *Consulta*, that offered its precious resources, such as professional and amateur photographers who have done an excellent job in the field. The graphic component, which represents the synthesis of the collected materials, was carried out by the former vice-president of the *Consulta*, expert in graphic processing tools, who created the graphic content for the panels that will be displayed. Here is the detail of our team:
 1. Antonio Maggioni – President of Consulta and team coordinator
 2. Giuseppe Arrigoni – Auditor of the Consulta involved in the technical component of the quarry environment
 3. Francesco Carminati – President of Circolo Fotografico
 4. Stefano Genco – Vice President of Circolo Fotografico

- 5 components of Circolo Fotografico: Serena Triggiani, Arianna Cioffi, Arianna Maggioni, Mattia Perico, Matteo Tasca

5. Anna Vitali – university student, involved in the recognition of flora and fauna
6. Daniele Previtali – former vice president of the Consulta, engaged in the graphic creation
7. Elena Scotti – university student, involved in the environmental component
8. Matteo Villa – member of the Consulta, taking care of the presentation in English to the international jury

All the members of the team worked on a voluntary basis motivated by the desire to spread the knowledge of the biodiversity of the Monte Giglio quarry to the community of Calusco, recipient of the project.

- **Actions and activities:** since team setting-up, research has carried out to improve the knowledge of the quarry environment:

- A. what does biodiversity mean?
- B. why are external animal and plant species settling?
- C. how did the wetlands arise in the quarry?

afterwards we proceeded to identify an attractive and usable diffusion method along the cycle path:

- A. during the walks
- B. during sport practices on the track

With:

1. usage of ten information panels distributed along the cycle path with photographs of the original species and the current biodiversity. Some suggestions for performing physical exercises are shown on the panels.
2. use of modern technologies able to stimulate curiosity and interest:
 - smartphone applications that can be activated through a QRCode placed on each panel. The application links to the website of the Consulta (www.consultacalusco.org) which includes the contents of the panel in a more extensive form and follow-ups, like additional images and movies.
 - the web pages will be continuously updated and enriched with new images of the quarry and its biodiversity at different times of the year.

The project is presented to the citizenship on September 15, 2018 in the "*Giornata delle Associazioni*", an event in which each association promotes its activities and projects. Students and schools will also be involved, because the project presentation will be held during the awarding of scholarships.

In the implementation phase of the project, the involvement of Italcementi personnel was fundamental, starting from the schedule of the entrances in the quarry for the realization of the photographic shoots, up to the collection of technical information. We have to thank all the staff of the Calusco cement plant, the Calusco quarry and the Bergamo headquarter for their aid and collaboration throughout the research phase. Without their support, the accomplishment of this work would not be possible.

- For Italcementi we have involved:

- 1- Director of the Calusco cement plant
- 2- Secretary of the cement plant
- 3- Monte Giglio quarry manager
- 4- The Communication staff of the Italcementi Office

Another important partner was the Municipality of Calusco d'Adda for information on the cycle path maps.

- For the Municipality of Calusco we have involved:

- 1- The Mayor
- 2- The Technical Office

Wrapping-up the action executed to conclude of the research project, we can list:

- 1- Collection information on the significance of biodiversity
- 2- Identification of dissemination methods on "what is behind the fence":
 - a. Photos
 - b. Video clips
 - c. QRcode
 - d. Web pages
 - e. Development of graphics for printing the synthesis of material collected on the panels

The planned or suggested actions are:

- 1- The realization of the panels and their installation near the fence between the quarry and the cycle path
- 2- Ongoing updating of web pages
- 3- Annual presentation to local schools
- 4- Implementation of an access area for guided tours inside the quarry and aimed at explaining the environment, biodiversity and recovery plan (suggested)

- Discussion:

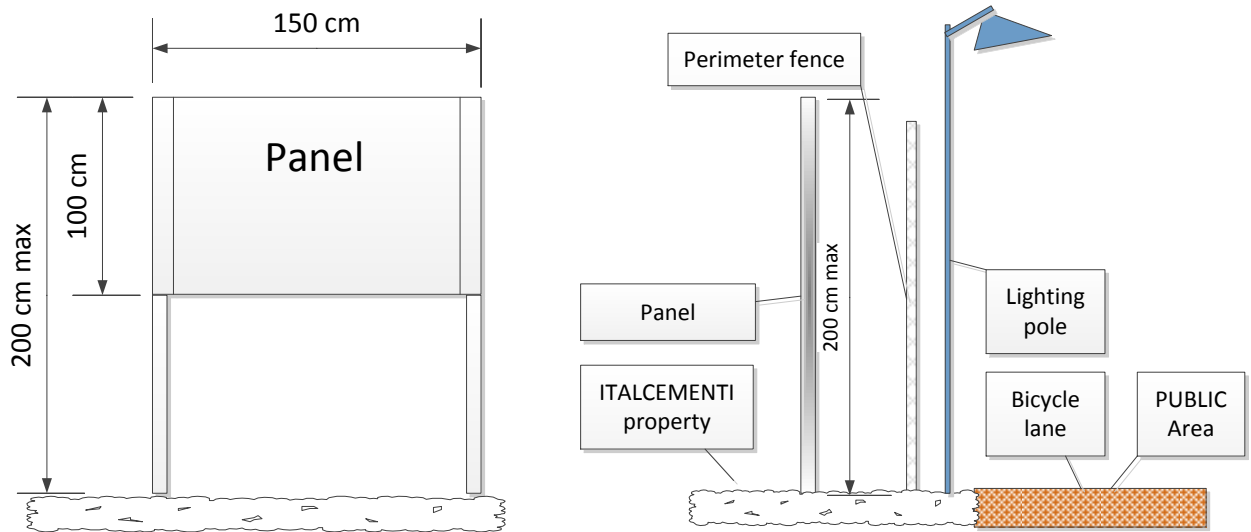
We did not have the opportunity to have a specific final meeting with the other teams to face a direct discussion on the projects. The only direct meetings took place during the first meeting for the presentation of the projects after the first selection and during the international jury examination. Despite this, the pages of the Quarry Life Award website, dedicated to project updates, allowed to share the various experiences.

In our point of view, we can certainly say that participation in the Quarry Life Award, drafting and developing the project, gave to the *Consulta* the opportunity to take care of the territory from a completely different point of view, compared to traditional activities of sport, leisure activities and social support for needs and fragility.

With this project, we could deal and study the environmental component of our territory.

- Outline the added value of the project for biodiversity, the society and the quarry / company: the creation of an informative path, used by citizens of Calusco for jogging, slow or fast walking, to communicate the natural characteristics that the quarry environment has helped to shape, should let people know that the quarry itself is not a depleted area, but it is as a new environment, a source of new natural wealth. The information distributed along the path through the exhibition panels combined with the possibility, which can be developed in the future, to access some parts of the restored quarry to "feel" the environment and the new forms of life that extractive activity has contributed to create, constitutes an incomparable source of knowledge. The quarry is not just "excavation or a crater" but a source of new life after the recovery. The quarry, despite the undeniable "invasive" presence, could be seen as a new habitat in which new animal and plant species take shelter that deserve to be discovered and preserved. The project can boost the awareness that we need cement to build the houses we live in; the cement raw materials extraction implies changes in the environment and in the territory, but, the quarry can be returned to the citizenship with a different, accessible and usable wealth, if it is well recovered, even with the intellectual contribution of the community. Moreover, the work carried out by this project (and not only) can be a feasible suggestion for Italcementi in the recovery plans of the quarry.

- **Deliverables:** to accomplish the project it is necessary to realize, print and install 10 panels. The graphics were developed for panels with dimensions of 150 cm width and 100 cm height. The support poles must have a height outside the ground of 200 cm maximum, to ensure that the lower part of the panel is detached from the ground about 100 cm. A simple drawing follows:



The panels with the relative printing process must be suitable for outdoor and safe installation. The estimated costs roughly ranging from 2,000 euro to 3,000 euro, with production schedules and installation in quarry of the panel in a total of 20 days.

- **Final conclusions:** we certainly had the opportunity to find an unexpected wealth of biodiversity present in the quarry. We have also "discovered" that during the excavation works of the tunnel connecting the "Colle Pedrino" and "Monte Giglio" quarries, a vein of water was intercepted that channeled to the valley of the Grandone and fed into the torrent that the name, in locality "Baccanello", has favored a new development of life and biodiversity long absent from the valley. Panel 9 is entirely dedicated to this particularity.

Aerial photo showing the positions of the panels with respect to the bicycle lane:



Following from page 11 is attached the graphic design of 10 panels.

To be kept and filled in at the end of your report

Project tags (select all appropriate):

This will be use to classify your project in the project archive (that is also available online)

Project focus:

- ☒ Beyond quarry borders
- ☐ Biodiversity management
- ☒ Cooperation programmes
- ☒ Connecting with local communities
- ☒ Education and Raising awareness
- ☐ Invasive species
- ☐ Landscape management
- ☐ Pollination
- ☐ Rehabilitation & habitat research
- ☐ Scientific research
- ☐ Soil management
- ☐ Species research
- ☐ Student class project
- ☐ Urban ecology
- ☐ Water management

Flora:

- ☒ Trees & shrubs
- ☐ Ferns
- ☒ Flowering plants
- ☐ Fungi
- ☐ Mosses and liverworts

Fauna:

- ☒ Amphibians
- ☒ Birds
- ☒ Insects
- ☐ Fish
- ☒ Mammals
- ☐ Reptiles
- ☐ Other invertebrates
- ☐ Other insects
- ☐ Other species

Habitat:

- ☐ Artificial / cultivated land
- ☒ Cave
- ☐ Coastal
- ☐ Grassland
- ☐ Human settlement
- ☐ Open areas of rocky grounds
- ☐ Recreational areas
- ☐ Sandy and rocky habitat
- ☐ Screes
- ☐ Shrub & groves
- ☐ Soil
- ☐ Wander biotopes
- ☐ Water bodies (flowing, standing)
- ☐ Wetland
- ☐ Woodland

Stakeholders:

- ☐ Authorities
- ☒ Local community
- ☐ NGOs
- ☐ Schools
- ☐ Universities

Attached

<p>Panel 1</p>	<div>   </div> <p>#MONTEGIGLIOLIFE</p> <div>  <p>INQUADRA IL QR PER ALTRI CONTENUTI</p> </div>  <p><i>Ciao,</i> la Consulta delle Associazioni di Calusco, partecipando alla quarta edizione del concorso Quarry Life Award 2018, desidera farti conoscere la BIODIVERSITA' della cava di MONTE GIGLIO.</p> <p><i>Come?</i> Con i pannelli distribuiti sulla pista ciclabile, idealmente un "portale" per portarti oltre la recinzione e vedere "cosa c'è dietro", ovvero come la cava ha cambiato l'ambiente originario e come la natura si riprende il suo spazio creando nuova vita: la biodiversità di cava.</p> <p><i>Inquadra, scatta e...</i> Inquadra il QR Code e potrai accedere a centinaia di fotografie e informazioni sul nostro territorio e sulla biodiversità all'interno della cava, diventando tu protagonista di #MONTEGIGLIOLIFE</p> <p><i>Non solo biodiversità</i> Visto che siamo sulla pista ciclabile, troverete qualche suggerimento per fare un pò di sana attività fisica.</p> <div> <p>Il Team</p> <ul style="list-style-type: none"> - Consulta delle Associazioni - Circolo Fotografico - Anna Vitalli - Daniele Previtali - Elena Scotti - Matteo Villa <p>Tutte le fotografie che vedi riprodotte sui pannelli sono state realizzate dal Circolo Fotografico di Calusco d'Adda all'interno della Cava di Monte Giglio nei mesi di maggio e giugno 2018.</p> </div> <p>SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO</p> <p>BENVENUTI</p>
<p>Panel 2</p>	<div>   </div> <p>#MONTEGIGLIOLIFE</p> <div>  <p>INQUADRA IL QR PER ALTRI CONTENUTI</p> </div>  <p>BIODIVERSITÀ: differenziazione biologica tra gli individui di una stessa specie, in relazione alle condizioni ambientali.</p> <div>    </div> <p>SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO</p> <p>IL PAESAGGIO E L'AMBIENTE</p> <div> <p>NON SOLO BIODIVERSITÀ: SPORT E FITNESS</p>  <p>SKIP ALTO 2 SERIE DA 30</p> </div>

Panel 3

BIODIVERSITÀ: la coesistenza in uno stesso ecosistema di diverse specie animali e vegetali che crea un equilibrio grazie alle loro reciproche relazioni.

 **THE QUARRY LIFE AWARD 2018**

#MONTEGIGLIOLIFE



INQUADRA IL QR PER ALTRI CONTENUTI

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

LE ZONE UMIDE

NON SOLO BIODIVERSITÀ: SPORT E FITNESS



PLANK FRONTALE
3 SERIE DA 30

Panel 4

BIODIVERSITÀ: comprende tutte le forme di vita (specie di animali, piante, funghi, batteri), i differenti habitat in cui vivono le specie (ecosistemi come il bosco o le acque) nonché la diversità genetica all'interno delle specie (ad es. le sottospecie, le varietà e le razze).

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INQUADRA IL QR PER ALTRI CONTENUTI

Vitalba - Clematis Vitalba

Campanula commestibile - Campanula rapunculus

Cespica annua o falsa camomilla - Erigeron annuus

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

LA FLORA

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

BURPEES
1 SERIE DA 30



Panel 5

BIODIVERSITÀ: è la vita esistente sulla terra in tutta la sua diversità. Rappresenta quindi la base e il potenziale di tutti i processi vitali e i servizi degli ecosistemi sul nostro pianeta.

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Vanessa del cardo
Zyganea transalpina
Pieris Brassicae

INQUADRA IL QR PER ALTRI CONTENUTI

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA
ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

LA FAUNA: GLI INSETTI

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

AFFONDI FRONTALI
3 SERIE DA 15

Panel 6

BIODIVERSITÀ: è il patrimonio naturale che lasciamo in eredità alle generazioni future, nei confronti delle quali la nostra società ha una responsabilità etica e morale.

THE QUARRY LIFE AWARD 2018

#MONTEGIGLIOLIFE

Coniglio selvatico - *Oryctolagus cuniculus*

INQUADRA IL QR PER ALTRI CONTENUTI

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA
ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

LA FAUNA: I MAMMIFERI

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

JUMPING JACK
2 SERIE DA 50

Panel 7

BIODIVERSITÀ è la premessa per uno sviluppo sano e naturale di tutti gli esseri viventi ed ecosistemi.

 **THE QUARRY LIFE AWARD 2018**

#MONTEGIGLIOLIFE

Gheppio comune - Falco tinnunculus

Folaga comune - Fulica atra

Germano reale - Anas platyrhynchos



INQUADRA IL QR PER ALTRI CONTENUTI

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

LA FAUNA: GLI UCCELLI

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

MOUNTAIN CLIMBER 2 SERIE DA 30

Panel 8

BIODIVERSITÀ è il risultato di milioni di anni di evoluzione sotto l'influsso delle forme secolari di utilizzazione umana (attività di raccolta, dissodamenti, agricoltura, insediamenti, cave, ecc.).

 **THE QUARRY LIFE AWARD 2018**

#MONTEGIGLIOLIFE



INQUADRA IL QR PER ALTRI CONTENUTI

SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO

VISTA AEREA

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

PIEGAMENTI A TERRA 3 SERIE DA 15

Panel 9

BIODIVERSITÀ

è un'assicurazione. Il numero di specie a livello mondiale, stimato a 10-20 milioni, la loro variabilità genetica e il numero quasi 2/2 inclassificabile di biocenosi e interazioni differenti permette di adattarsi a un ampio ventaglio di condizioni ambientali.

#MONTEGIGLIOLIFE

Vena d'acqua intercettata durante i lavori di scavo della galleria che collega le cave "Colle Pedrino" e "Monte Giglio", incanalata fino alla valle del torrente Grandone in località "Baccanello", favorendone in questo modo un nuovo sviluppo di vita e biodiversità da tempo assente dalla valle.

**SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA
ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO
LA BIODIVERSITA' FUORI DALLA CAVA**

INQUADRA IL QR PER ALTRI CONTENUTI

NON SOLO BIODIVERSITÀ: SPORT E FITNESS

**SQUAT
3 SERIE DA 15**

Panel 10

Negli anni la cava ha modificato il territorio, differenti specie di piante, insetti, uccelli, anfibi hanno trovato all'interno di essa un habitat ideale che ha dato origine ad una nuova biodiversità sul nostro territorio. Le zone colorate indicate nel disegno rappresentano il piano di recupero delle aree estrattive. La nuova biodiversità di cava proseguirà negli anni a venire.

#MONTEGIGLIOLIFE

PRIMA

DOPO

INQUADRA IL QR PER ALTRI CONTENUTI

**SPORT, PASSEGGIATE, FOTOGRAFIE E TECNOLOGIA
ALLA SCOPERTA DELLA BIODIVERSITÀ DEL MONTE GIGLIO
RESTITUZIONE AL TERRITORIO**

LEGENDA:

- area protetta (132.740mq)
- area protetta (115.821mq)
- area protetta (124.830mq)
- area protetta (118.128mq)
- area protetta (15.885mq)
- area protetta (135.400mq)
- area protetta di recupero (16.316mq)
- area protetta e recupero (13.170mq)
- finestra geologica