



Past - Present - Future



OPOLSKIE CENTRUM
ROZWOJU GOSPODARKI

Interreg
CENTRAL EUROPE



European Union
European Regional
Development Fund

InduCult2.0

IMPLEMENTATION OF MOBILE EDUCATIONAL EXHIBITION IN COOPERATION WITH COMPANIES, HERITAGE INSTITUTIONS AND UNIVERSITIES

Implementation of school initiatives promoting Industrial Culture	Final version 03 2019
---	--------------------------



D.T.3.3.3



Reporting Period 6



PP9, Opolskie Centre for Economy Development



Marcin Staniszewski
m.staniszewski@ocrg.opolskie.pl

InduCult2.0 is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

TABLE OF CONTENTS

1. Abstract.....	3
2. Project Context.....	3
About InduCult2.0.....	3
About Opolskie Centre for Economy Development	4
3. Introduction & Objective.....	4
4. Applied Approach.....	5
Interactive.....	5
Educational.....	5
Mobile	6
Cooperative	6
Thematic	6
5. Results	7
Main products.....	7
Structure of exhibition	7
Plan.....	7
Exterior appearance	8
Walk-in interactive educational exposition	8
Workshop area	9
Schools and pupils.....	9
Facilitating use beyond InduCult2.0	9
Summary.....	10
6. Goal Achievement, Lessons Learned and Transnational Added Value	11
7. Outlook and sustainability	11
8. Annexes	13
Participants list (in Annex 1)	13
Pictures.....	13

1. Abstract

The implementation of interactive educational mobile 3D exhibition "INDUSTRIALNE OPOLSKIE" related to the industry issues in the Opolskie region in cooperation with companies, heritage institutions and universities supports school initiatives promoting cultural and historic dimension of industrial work. Innovative initiatives raise awareness about past and present industrial jobs and as well as will help to imagine industrial jobs of the future. The implementation was based on concept prepared with involvement of regional experts from educational and heritage institutions, practitioners from associations and companies, and teachers.

The exhibition has fulfilled its main aspects built-in within its definition: interactive, educational, mobile and cooperative - at first the interactivity and educational aspect of the exhibition for pupils to play, learn and participate in its enhancement through workshops. The workshop has also truly helped pupils to imagine industrial processes and play industrial functions despite wide age range from 7 to 18. Tested two scenarios for 7-12 and 13-18 year-old pupils are focused on defining the problem, designing solution and ending up being product related to industry by the use of 3d visualisations, software and printer. Scenarios are based on regional industry context. The achievements of "industrial teams" of pupils will be promoted through symbolic awards for playing their assigned job role and enhancement of exposition based on their common work outcomes.

The implementation of this concept for school initiatives promoting Industrial Culture has involved not only 3 schools, 2 companies, regional museum and academics from technical university but also local authors of independent publications about industrial heritage. The concept is easily applicable to other partner regions.

2. Project Context

About InduCult2.0

InduCult2.0 project - „Industrial heritage, cultural resources of current industries and creative pioneers - utilizing Industrial Culture in Central Europe” establishes the idea of Living Industrial Culture in Central Europe and as such reveals, strengthens and utilizes the unique cultural spirit of industrial regions (www.inducult.eu). InduCult2.0 is initiated by 8 long-standing industrial regions represented by: Germany, Austria, the Czech Republic, Italy, Slovenia, Croatia, Poland and Belgium. Together with regional stakeholders, they rediscover and develop the positive elements of industrial communities. Specifically, the partnership intends to:

- promote and establish the idea of Industrial Culture in Central Europe;
- strengthen the distinct culture of industrial regions and utilise it as location factor;
- empower industrial regions by re-activating their pioneer spirit.

Involved are eight regions from Germany, Austria, Belgium, Italy, Czech Republic, Slovenia, Croatia and Poland. They are supported by two scientific partners from Germany and Austria.

According to InduCult2.0 framework actions have been by the regions within three areas:

- fostering regional identity (T2),
- influencing industrial labour market and company commitment (T3),
- promoting creativity and pioneer spirit (T4).

Respective for this document is the area of activities for influencing industrial labour market and company commitment” (T3), which compiles a range of awareness-raising activities:

- influencing industrial labour market and company commitment,
- testing measures for binding work force and companies through Industrial Culture.

About Opolskie Centre for Economy Development

Opolskie Centre for Economy Development implements some regional economic and innovation policy activities delegated by Board of Voivodeship. It is an intermediary institution for Regional Operational Fund priorities directed to entrepreneurs. It also implements some key systemic projects for innovation and economic policy implementation e.g. attracting investors, vocational education system, apprenticeship programmes. It has implemented various projects that open regional innovation system to international cooperation and support innovativeness and creativity. Currently OCRG is applying quadruple helix collaborations (including social sphere) for smart specialisation development.

3. Introduction & Objective

The respective activity for this pilot action is “influencing industrial labour market and company commitment”. Culture is an important developmental asset for (old) industrial regions. Indeed, this is especially true for the Opolskie region. Benefits can be gained not only by shaping the regions’ image and regional identity, but also by new approaches deploying Industrial Culture for securing labour force and strengthening the regional ties of companies. The main challenge is to raise interest of pupils and youth in industrial culture and job-career opportunity in that sector. Furthermore, some of regional companies do not realise how they can attract labour force by utilizing cultural means of industry. For the youth and children educational aspect is very relevant as they get to know culture specifically in Poland mainly from schools, libraries, cultural centres, universities and museums. For this pilot activities in collaboration with schools, educational and heritage institutions, universities and at last but not least local companies, the awareness of the youth about past, present and future jobs in the industry will be raised and shared with younger pupils in Opolskie region.

This paper report regarding the implementation of mobile, interactive and educational 3D exhibition "INDUSTRIALNE OPOLSKIE" is related to the industry issues in the Opolskie region. The exhibits and models are focused at the industrial heritage, present and future of the regional industry. In Opolskie region the most traditional and effective fields of industry are: cement industries, iron foundries, lime, furniture, and food, car manufacturing and chemical industries. The 3D exhibition has focused on lime and cement industries and helps to realise the potential of these industries and their work options in past, presence and near future. In parallel to that school initiative has promoted attractive

cultural/historic dimension of industrial work, jointly with regional industrial museums, companies, schools and independent authors of publication about industrial heritage.

4. Applied Approach

The idea of Opolskie Centre for Economy Development for school initiatives of an interactive educational mobile exhibition in cooperation with companies, heritage institutions and universities was thoroughly discussed and detailed during series of workshops with regional focus group in 2017. Regional experts and stakeholders from numerous institutions and practitioners were involved in conceptualization, planning and implementation phases. That includes Regional Centre for Education Support, local authorities, directors of schools from Opolskie, exhibitors from Museum of Opolskie Silesia, Robot Factory, Dobroteka, Chespa company, GóraŹdŹe Cement S.A., Lhoist S.A. as well as independent authors Eryk Boronczyk, Regina Kalla-Szulc and prof. Jan Kubik.

There was necessary to use investment for the pilot to secure full concept implementation with right balance of efficiency and effectiveness. The best way to describe the implemented exhibition is to go through attributes that are within its definition: interactive, educational, mobile and cooperative. They helped to define right objective of investment. Educational feature was provided by experts leading the presentation and workshop of the exhibition. The cooperative approach was secured by organiser (PP9) itself by incorporating inputs from companies, institutions and individuals.

Key issues for the investment were to secure necessary equipment for interactive, mobile and educational features. The designed exhibition walls using outlook on recognisable sites related to industrial region of Opolskie was necessary for thematic visual and emotional background for further ongoings within the exhibition site and workshop area. The exhibition wall was prepared in a mobile system that is equivalent and compatible to a system already owned by PP9 that enabled to set the whole exhibition wall in planned size of min. 28m². The thematic furniture (working desk, chairs, showcase table) and IT equipment (scanner, printer, monitor) was necessary for functioning of the workshop area and for mockup of Opolskie region lime and industry sites with playable 3D models.

Implementation adopted innovative youth-to-youth approach of InduCult2.0 through development of scenarios that helped to disseminate the key messages to target groups: the youth (13-18 y.o.) and younger pupils (7-12 y.o.).

Still the best way to describe the implemented exhibition is to go through attributes that are within its definition: interactive, educational, mobile and cooperative.

Interactive

The exhibition helps to turn pupils' ideas inspired by historical and present local industry into 3d visualisations and models. The pupils gain knowledge about historical and present industrial processes through seeing 3d visualisations and touching models.

Educational

Inner exhibition area is a working space where they can participate in design workshop that uses youth-to-youth approach. The workshop scenarios are adjusted to local industrial traditions and age of pupils with the help of relevant local companies, heritage institutions

and universities. The workshop scenarios focus on teambuilding and playing roles based on industrial process.

Mobile

Mobility of exhibition is one of its crucial assets. It can be used in most of schools of Opolskie. Mobility means also adjustment for school expectations and existing infrastructure of average schools in Opolskie. The inner exhibition area is fully equipped and enables to lead workshops sessions for school children independently to school infrastructure. In addition, the size of exhibitions and materials used for the exhibitions has to conform to the expectations and health and safety measures.

Cooperative

The cooperation is a parallel objective of this activity. Especially in the context of the education, cooperation with companies, heritage institutions, universities and companies related to industry sector will provide necessary insights for thematic and locally relevant scenarios.

Thematic

Implemented exhibition is related to Industrial Culture of Opolskie, especially to the argumentation of InduCult2.0 regional brochure available on OCRG website at <http://www.ocrg.opolskie.pl/media/system/projekty/6bba7cea5b0e142484e5a280d69175fb.pdf>.

The exhibition is also related to the regional industrial culture event INDUSTRY & SHIPPING DAYS, that promotes Industrial Culture of Opolske among others by modern forms of expression such as InduCult multimedia show on Gogolin limekilns available to watch on Youtube at <https://www.youtube.com/watch?v=L9aqW1glgcY>.



5. Results

The mobile, interactive and educational 3D exhibition "INDUSTRIALNE OPOLSKIE" was finally implemented as the pilot action of InduCult2.0 project between December -2018 and January 2019.

Main products

The main goal was to increase pupils' knowledge about past, present and future jobs in the regional industry. The implementation of the mobile, interactive and educational 3D exhibition "INDUSTRIALNE OPOLSKIE" achieves this aim by combination of fun and science by:

- creating basic understanding of ongoing transformation processes in the industry,
- participation in processes of defining the problem, designing solution and ending up with product related to industry,
- playing roles of jobs/functions related to industry,
- promoting achievements of the industrial teams,
- enhancement of exposition based on input from industrial teams.

The 3D exhibition visited schools in Opolskie region during the special events, days etc. During each visit, the trainers and practitioners with university and company background led the professional workshop sessions and adopt innovative youth-to-youth approach. The space of the 3D exhibition is be open, interesting-looking and children-friendly. This type of exhibition raise children's interest in industrial aspects and encourages to discover the models of factories, tools and exhibits etc.

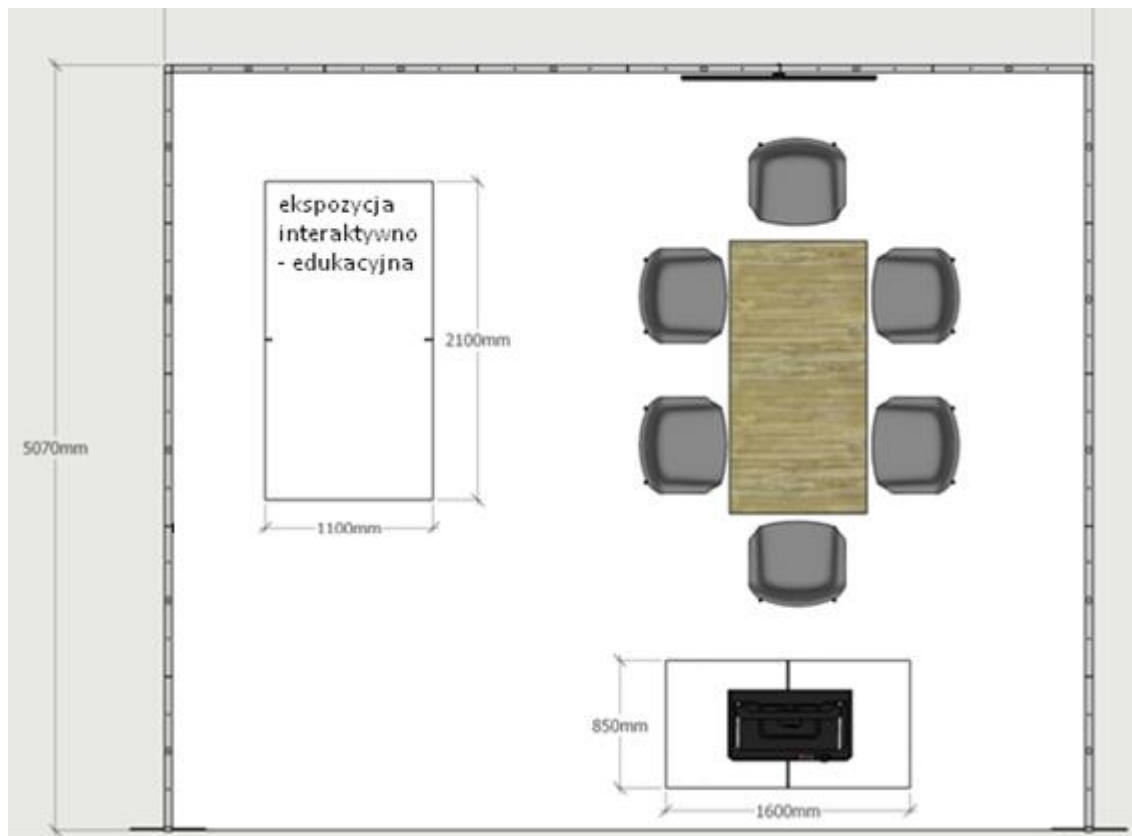
The pupils gained knowledge about the regional industry through seeing, touching and designing models. The designers prepared different scenarios for workshops sessions for 2 age groups. Scenarios have been focused on field of lime and cement industries in Opolskie and used information from companies, heritage institutions, academics and local authors.

The exhibition and workshops were led by young but professional and experienced designers who took care of pupils whilst visiting the exhibition and participating in the workshops sessions, all safety and health aspects were be provided. In that way, step by step, in the end exhibition raised interest of youth in industrial culture and work options in industrial sector. The cooperation with schools has been confirmed to be a good early step for promoting the cultural/historic dimension of industrial work and attractive job-career opportunities in that sector.

Structure of exhibition

Plan

- size: 30 m²
- shape: rectangle (5x6m)



Exterior appearance

Specially designed exhibition walls based on recognisable factories and general topic industrial culture-related sites (for example cement plant, limekilns, post-industrial geopark)



Walk-in interactive educational exposition

- specified for lime and cement industry (possible to change for other models representative for other industries)

- multimedia presentations on industrial past, presence and future of Opolskie in cooperation with local stakeholders played on LED screen
- physical interactive models of one selected option of recognisable industrial sites in Opolskie region in cooperation with companies
- 3D visualization of remaining options of recognisable industrial sites in Opolskie in cooperation with companies played on LED screen and laptops



Workshop area

- inner exhibition furniture (stools, designers desk, chairs)
- LED screen
- 3D printer
- 3D scanner
- educational 3D software

Schools and pupils

- primary schools located in Opolskie (Public Primary School nr 2 in Gogolin, Public Primary School nr 2 in Krapkowice)
- secondary schools located in Opolskie (Public Secondary School nr 2 in Kluczbork)
- based on calendar developed in Periods 1-2 updated in Period 5

Facilitating use beyond InduCult2.0

OCRG following tips from regional stakeholders produced for the exhibition special recognisable name for pilot action to underline its relation to Industrial Culture of Opolskie and facilitate to use the exhibition within minimum next 6 years by different regional institutions and companies according to two-tier mechanism. It has also respected branding ruled of Interreg CE Branding Manual.



OPOLSKIE CENTRUM
ROZWOJU GOSPODARKI



InduCult2.0

INDUSTRIALNE OPOLSKIE

**Mobilna interaktywna
wystawa edukacyjna 3D**

OCR has also prepared guidelines with scenarios, lessons learnt and assumptions for:

- building up thematic presentations for other industries,
- follow-up exhibitions for the same pupils in the future.

OCR has planned two-tier mechanism of further use of exhibition:

- funded by public authorities,
- sponsored by companies.

The companies in addition to regular agreement of conforming branding, quality, enforcing guidelines and scenarios can participate in development of the exhibition by adding its thematic contents, models and scenarios in collaboration with OCR. The special mechanism is planned to be tested by enabling NGOs to service future presentations of the exhibition by industrial companies.

Summary

The exhibition has been tested in three locations three day in a row from 21 to 23 January 2019. It has also tested abilities to move quickly from one to another location distanced more than 60 km from each other. The exhibition resulted in total with:

- 468 pupils as viewers
- 36 pupils trained during workshops

Dec 2018-Jan 2019	Schools in Opolskie	Results
Interactive educational mobile 3D exhibition "INDUSTRIALNE OPOLSKIE"	Gogolin	<ul style="list-style-type: none"> • 228 pupils viewing exhibition • 12 pupils participating in workshops
	Kluczbork	<ul style="list-style-type: none"> • 116 pupils viewing exhibition • 12 pupils participating in workshops
	Krapkowice	<ul style="list-style-type: none"> • 124 pupils viewing exhibition • 12 pupils participating in workshops

6. Goal Achievement, Lessons Learned and Transnational Added Value

The concept of exhibition has been faithfully implemented authorised by OCRG according to earlier detailed specification. Therefore all main assumptions have been achieved. The pilot action statistics shown that exhibition is very efficient in increasing awareness about industry and industrial jobs and effective in learning 3d desinging skills pupils aged from 7 to 18 year old pupils.

The implementation for the specific theme of industry but targeting wide range of pupils and schools of Opolskie region is easily applicable for other industries and regions. It used lessons learnt from comparable good practices for Industry4.0 jobs promotion. The implementation can provide much inspiration for the other InduCult2.0 partners working on the same topic, especially in the context of the education, cooperation with companies, heritage institutions, universities and companies related to industry sector.

7. Outlook and sustainability

The implementation of mobile, interactive and educational 3D exhibition "INDUSTRIALNE OPOLSKIE" provides the necessary spirit for the further development of the industrial and educational aspect as a field of experimentation. Institutions, companies and individuals involved during conceptualisation, planning and implementation phases have communicated the InduCult2.0 idea to their inner and outer environment in their own

language. This is also a key value for disseminating the concept and further development based on implemented exposition.

The clearer vision for the continuation of the idea has also appeared during the planning and implementation phase. The first available option was to pass the task of continuing exhibition to regional educational institution as an intermediary organising presentation at schools. By having lessons learnt and choosing the regional coordinator by OCRG it has been decided that instead of passing the exhibition to other institution OCRG has to set up a mechanism of continuation under supervision by the regional coordinator by OCRG. The mechanism will be tested in the upcoming two years.

8. Annexes

Participants list (in Annex 1)

Pictures



