



CSETIR/BIM/DIGIPLACE

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Vice-president ISHCCO

19Mar21, ISHCCO General

Assembly Open to Public

Project Demonstration

- Project financed by Erasmus+
- Construction Safety Education and Training using Immersive Reality
- 4 universities and one construction company
- 3 years
- Half million Euros
- ISHCCO, AECEF, ENETOSH, ...to validate and tune up



Co-funded by the
Erasmus+ Programme
of the European Union

WHAT?

3

- Construction tasks addressed at any time
- Risks associated from planning and statistics
- Visualization of environment
- Static, dynamic or interactive participation
- Learning/training in terms of users

2019-2021



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Construction Safety with Education
and Training using Immersive Reality

1.IO1 – NEEDS ANALYSIS

Construction tasks addressed at any time

Risks associated from planning and statistics

Visualization of environment

Static, dynamic or interactive participation

Learning/training

Generic in terms of users

1.IO1 – NEEDS ANALYSIS

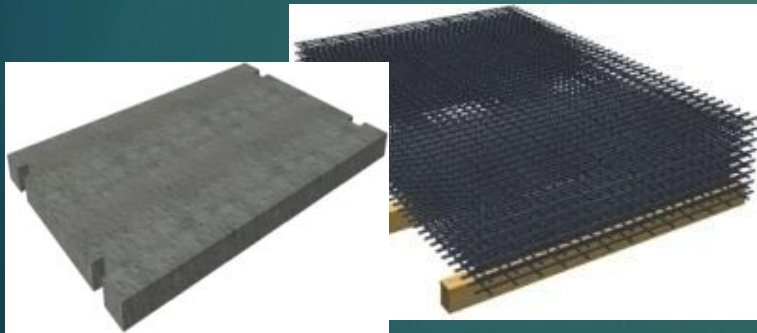
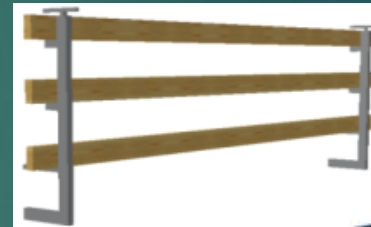
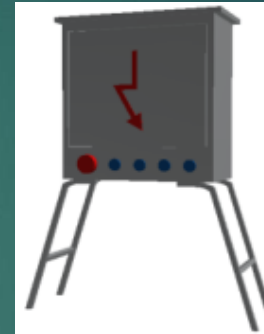
1. OSHA PIXO safety compliance Virtual Reality
2. Fulmax
3. VR Safety Training for Construction companies (LandMarkVR)
4. DOKA

2.IO2 – BIM MODELS



2. IO2 – BIM MODELS

- Construction site objects
- OHS equipments



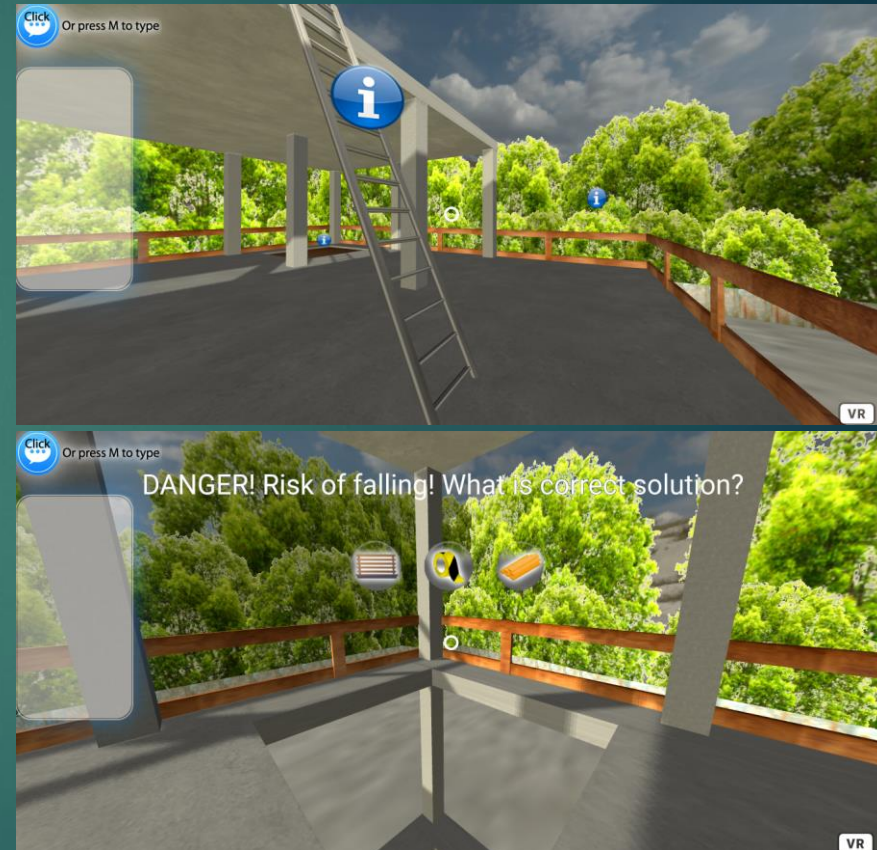
2. IO2 – BIM MODELS

- List of risks and hazards groups
- Database of models vs risk scenarios
- Select models/scenarios for processing in VR/AR
- Include objects in models as convenient

3. IO3 – VR/AR INTERACTIVE

Software and hardware support

- Anything with internet browser
- Operation systems - Window, Android, iOS
- Platforms - PC, smartphone, tablet, VR hardware
- VR hardware – Oculus, HTC, Microsoft, VR headsets for smartphones



3. IO3 – VR/AR INTERACTIVE SOLUTIONS

1. Presentation, demonstration, short voice lecture
2. Practicing and problem solving in scenarios
3. Verifying competences:
knowledge/skills/attitudes

4. IO4 – TRAINING MANUALS

1. Digital: web space
2. Digital: software environment - interactive



DIGIPLACE

TOWARDS A EUROPEAN DIGITAL PLATFORM FOR CONSTRUCTION

Digiplace is a framework allowing the development of future digital platforms as common ecosystems of digital services that will support innovation, commerce, etc.

<http://digiplace.project.eu>

DIGIPLACE

"CALOHEZ" - soeiro.alfredo@gm x Thank you for your participation x News x Google Calendar - March 2021 x +

← → ↻ ↗ 📍 digiplaceproject.eu/news ☆ A ⋮

integrates different technologies and various applications and services.



16-03-2021

In case you missed the DigiPLACE event organised in the framework of the EU Industry Week 2021

In case you missed the DigiPLACE event organised in the framework of the [EU Industry Week 2021](#), you can now watch the recording of the full session and reach the slides presented during the event.



Towards a Reference Architecture Framework for a Digital Industrial Platform for the construction industry

16 March 2021 | 10am – 12pm CET | Virtual event



EU INDUSTRY WEEK 2021

#EUIndustryWeek

In order to watch the recording of the full session, please follow [this link](#).

In order to view and download the presentations, please follow the links below:

1. Project overview by Alberto PAVAN, DigiPLACE coordinator - Politecnico di Milano
2. The power of the platform: the case of construction & DigiPLACE by Ziga TURK, University of Ljubljana
3. The DigiPLACE Reference Architecture Framework (RAF) by Nicolas NAVILLE, CSTB
4. Involving the construction stakeholders – the role of the DigiPLACE CoS by Luigi PERISSICH, Federcostruzioni

08-03-2021 https://www.digiplaceproject.eu/images/documents/DigiPLACE_event_on_16_March_-_Nicolas_Naville.pdf

09-03-2020 DigiPLACE

24-07-2020 Identifying

Windows Taskbar: Type here to search, Spotify, WhatsApp, File Explorer, Microsoft Word, Google Chrome, Firefox, Mail, Edge, Teams, System tray: 09:01, 18 Mar 2021, 3 notifications.

VISION ZERO AND THE GREAT RE

Introduction of Shimizu Smart Site



Manual Welding

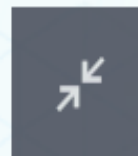
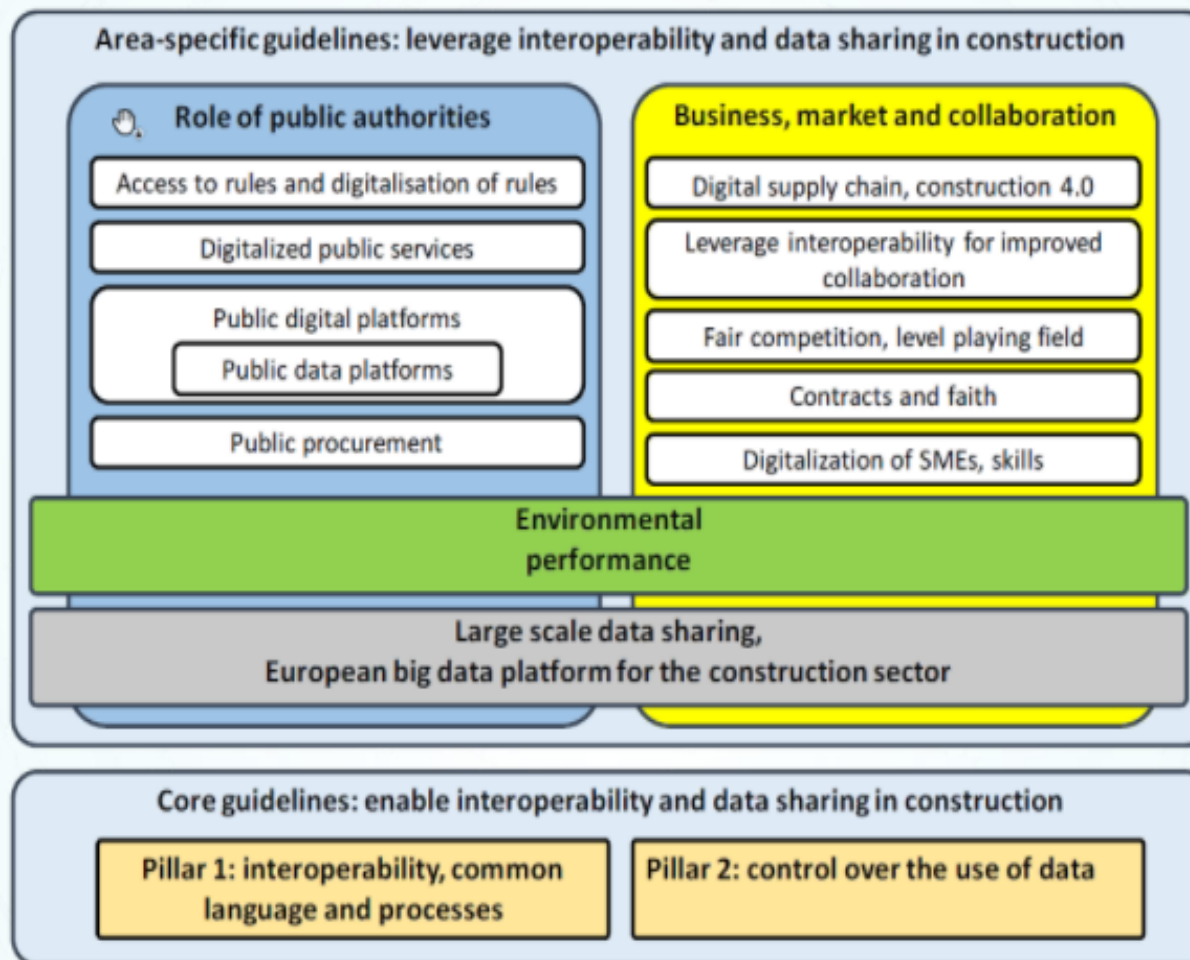


Welding by Robo-Welder





Reference Architecture Framework for construction digital platforms



Core guidelines: enable interoperability and data sharing in construction

Pillar 1: interoperability, common language and processes

Data formats, models and semantics

Semantics

Semantic interoperability,
Data dictionaries

Application: focus on
product data

Data models and formats

Open Standards

Standards for data
exchange & access

Integration of BIM and GIS
data

Information management and processes

Collaboration, Common Data Environments

Data management along the lifecycle, digital twin

Governance and access to standards and frameworks

Open and easy
access

Engage with
the community

Pillar 2: control over the use of data

Data storage, security and sovereignty

Data security

Data sovereignty

GAIA-X, European Common
Data Spaces

Data ownership

GDPR compliance

Data ownership in business
relations

Transparency on the use of
data

Data qualification and trust

Data certification,
blockchain

Data with contractual or
regulatory value

Data availability, access and sustainability

FAIR data principles

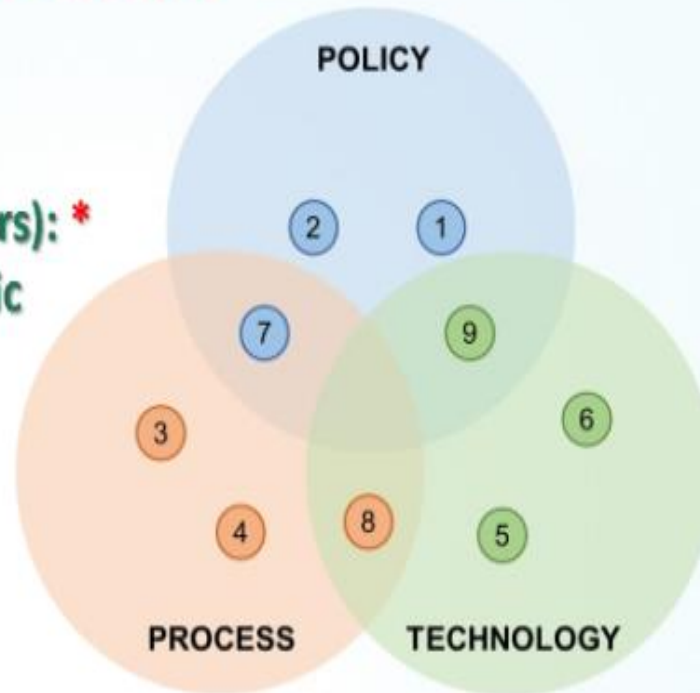
Open APIs

Data sustainability

DigiPLACE Stakeholder's 15 Clusters



1. Policy makers
2. Educational institutions
3. Construction organizations (+ 6 clusters): *
Designers, Contractors, Owners, Public clients, Private clients, Operators,
4. Individuals
5. Software developers
6. Value-adding resellers
7. Industry associations
8. Communities of practices
9. Technology advocates



*1 additional cluster **Construction Product Manufacturers** have been included in the list according to their central role in pushing from the bottom the use of digital technologies and platforms in particular, **bringing the total to 15 clusters.**

WP2: Progress Update (M1-M12)

Tangible outcomes



Cluster Categories	N°
Educational institutions	103
Industry associations	85
Designers	67
Contractors	59
Software developers	64
Policy makers	40
Construction product manufacturers	29
Operators	24
Technology advocates	24
Individuals	18
Communities of practices	14
Public clients	15
Value-adding resellers and rental companies	10
Owners	7
Private clients	2

Country	N°	%
Italy	180	31,9
Spain	61	10,8
Finland	46	8,2
France	43	7,6
Germany	33	5,9
Belgium	27	4,8
Netherlands	18	3,2
Portugal	18	3,2
United Kingdom	15	2,7
Norway	14	2,5
Denmark	10	1,8
Ireland	10	1,8
Slovenia	10	1,8

Country	N°	%
Greece	9	1,6
Czech republic	7	1,2
Austria	6	1,1
Estonia	6	1,1
Sweden	6	1,1
Croatia	4	0,7
Hungary	4	0,7
Lithuania	4	0,7
Luxembourg	4	0,7
Poland	4	0,7
Latvia	3	0,5
Slovakia	3	0,5
Turkey	3	0,5

Country	N°	%
Canada	2	0,4
United States	2	0,4
Romania	2	0,4
Argentina	1	0,2
Australia	1	0,2
Brazil	1	0,2
Bulgaria	1	0,2
Europe	1	0,2
India	1	0,2
Malaysia	1	0,2
North Macedonia	1	0,2
Switzerland	1	0,2
Ukraine	1	0,2

“Join now and be an active part in building the European construction digital infrastructure”



Join now the DigiPLACE Community of Stakeholders



Also on www.digiplaceproject.eu



Thank you for the attention!

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