UNITO – CCR

CAPuS PROJECT – DETERIORATION (WALL PAINTING)

			1. GENERAL DATA
NUMBER OF PARTNER:	P1, P2		
TYPE OF WORK:	Mural		
COUNTRY:	Italy		
CITY:	Turin		
ADDRESS:	Via Ragazzoni		
OWNER / CUSTODIAN:	Turin Municipali	ty	
LEGAL PROTECTION:	-		
ARTIST:	CORN79, CND, R	ESER, VESOD, WEN	IS
TITLE OF THE WORK:	No title		
YEAR OF EXECUTION:	2011		
MATERIALS:	Paint, bricks		
DIMENSIONS (cm):	Hight: 500	Width: 1500	Depth:
	2	. DESCRIPTIO	ON OF THE PROBLEM (DEGRADATION)

<u>PRII</u>	MARY CAUSES (RELATED TO THE TECHNIQUE, TECH	INOLOGY AND LOCATION OF THE OBJECT)
<u>LAT</u>	ER INTERFERENCES	
THE	RMAL-HUMIDITY FACTORS	
THE	RMAL FACTORS	
<u>PHY</u>	<u>'SICO-CHEMICAL FACTORS</u>	
BIO	LOGICAL FACTORS (biological colonisation, biofilm	1
ME	CHANICAL FACTORS	

OTHERS

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

vandalism, salt dissolution and crystallization, biological colonization, mechanical injuries.



SUR	FACE – LOSS OF COHESION							
1	COLLAPSE		2	13	13			
2	DISINTEGRATION	a						
3	POWDERING	2	14 13				14	•
4	CRUSHING	b 14	2 8 13	10	10	14	13 14	
5	CRUMBLING		13 14	10				
6	TEARING	c 13	328 814			14	10 10	
7		A		В		с		
,								
o	INCISION							
9	FRACTURING	NOTES, and	ing of the red .	orniala urba	on applied	l a hava tha	notroil gro	
10	CRACKING	NOTES, track	ing of the red v	ernisn wne	en applieu	above the	petroligre	en one.
11	SPLITTING							
12	OPEN JOINT							
13	DELAMINATION							
14	FLAKING							
15	SCALING							
SUR								
	FACE – LOSS OF MATERIAL							

17	LACUNA				17					
18	EROSION	a	17	17	17					
19	ABRASION				17			17		
20	WEAR	b	17	17	17		17	17		
21	CHAFE		17				17	17		
22		с	17	17	16	17	17	17		
22	ROUNDED		A	1/	B 17	1/	с 17	1/		
23	PERFORATION									
24	PITTING	NOTES: (1	.6) is referi	red to a de	cay likely ca	aused by an	anthropic	vandalism	/demage.	
25	GALLERY									
26	CAVITY									
27	SCRATCH									
<u>SUR</u>	ACE – DEFORMATION									
28	DEFORMATION									
29	SHRINKAGE	a								
30	SWELLING				32					
31	DEPRESSION	d			32	32				
32	BLISTERING	c								
33	BUCKLING									
			A		В		С			I

34	WARPING								
35	TORSION								
36	BEND								
37	ROUGHENED								
<u>SUR</u>	FACE – OPTICAL ALTERNATION								
38	CHROMATIC ALTERATION								
39	DARKENING	a							
40	FADING								
41	YELLOWING	b			41	41			
42	BLOOMISH								
43	STAINING								
44	SPOTTING		A		В		С		
			NOTES: ye	llowed pai	nt dripping	<u>z</u> s			
SUR	FACE – CHEMICAL AND								
<u>BIOL</u>	OGICAL ALTERNATION								
45	BURNING								
46	CORROSION								
47	CRUST								
48	EFFLORESCENCE								

49	EMBRITTLED									
50	EXUDATION	a		48						
51	PATINA		48						-	
БЭ		b						48		
52	BIOLOGICAL COLONISATION			48	48			48	-	
53	BIOFILM	c	48	48						
			48							
			A		В		С			
SURF	ACE – ADDITION OF									
<u>SUBS</u>	TANCES								1	
54	DEPOSIT	a								
55	DUST									
56	ACCRETION	b								
57	CONCRETION									
58	FILM	c		60	60	60				
59	SOILING		А		В		С			
60	GRAFFITI									
61	INCLUSION									
62	INFILL									

			1. GENERAL DATA					
NUMBER OF PARTNER:	P1, P2	P1, P2						
TYPE OF WORK:	Mural							
COUNTRY:	Italy							
CITY:	Turin							
ADDRESS:	Via Carso (De Va	lle's Garden)						
OWNER / CUSTODIAN:	Turin Municipali	ty						
LEGAL PROTECTION:	-							
ARTIST:	BIGTATO, JOES,	PIOVE, WENS, IBS						
TITLE OF THE WORK:	We Love Enak 20	011						
YEAR OF EXECUTION:	2011							
MATERIALS:	Paint, bricks							
DIMENSIONS (cm):	Hight: 300	Width: 1000	Depth:					
	2	. DESCRIPTION	ON OF THE PROBLEM (DEGRADATION)					
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE, 1	FECHNOLOGY AND LOCATION OF THE OBJECT)					

LATER	INTERFERENCES	
THERM	AL-HUMIDITY FACTORS	
THERM	<u>AL FACTORS</u>	
PHYSIC	CO-CHEMICAL FACTORS	
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)
MECHA	ANICAL FACTORS	
OTHER	<u>RS</u>	

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

vandalism, biological colonization, animal activities.



he form refers to the portion of the mural with the word "sayo"

SURF	ACE – LOSS OF COHESION								
1	COLLAPSE								
2	DISINTEGRATION	a			10		10	10	
3	POWDERING				10 10		10		
4		b					10		
4	CRUSHING		10	10	10	10	10		
5	CRUMBLING	с		10	10	10			
6	TEARING								
7	CUTTING		A		В		С		
8	INCISION								
9	FRACTURING	NO	TES: Cracki	ng mainly	affected w	hite and lig	ght-brown p	ainting lay	yers.
10	CRACKING								
11	SPLITTING								
12	OPEN JOINT								
13	DELAMINATION								
14	FLAKING								
15	SCALING								
SURF	ACE – LOSS OF MATERIAL								
16	LOSS								
		1							

17	LACUNA	
18	EROSION	
19	ABRASION	
20	WEAR	
21	CHAFE	
22	ROUNDED	
23	PERFORATION	
24	PITTING	
25	GALLERY	
26	CAVITY	
27	SCRATCH	
<u>SURI</u>	FACE – DEFORMATION	
28	DEFORMATION	
29	SHRINKAGE	
30	SWELLING	
31	DEPRESSION	
32	BLISTERING	

33	BUCKLING	
34	WARPING	
35	TORSION	
36	BEND	
37	ROUGHENED	
<u>SURF</u>	ACE – OPTICAL ALTERNATION	
38	CHROMATIC ALTERATION	
39	DARKENING	
40	FADING	
41	YELLOWING	
42	BLOOMISH	
43	STAINING	
44	SPOTTING	
SURF	ACE – CHEMICAL AND	
<u>BIOL</u>	OGICAL ALTERNATION	
45	BURNING	
46	CORROSION	
47	CRUST	

48	EFFLORESCENCE								
49	EMBRITTLED	a							
50	EXUDATION								
51	PATINA	b							
52									
52	BIOLOGICAL COLONISATION	с							
53	BIOFILM	L	•	52	<u>52</u>	2 63	52 C	63	
63	OTHER: ANIMAL MANURE		A		в		ι		
SURF	ACE – ADDITION OF								
SUBS	STANCES								
<u> </u>		a	60						
54	DEPOSIT								
55	DUST			60					
56	ACCRETION	b		60					
57	CONCRETION		59	59	59				
50	511 M A	с				59		59	
58	FILM		59	60	59)	59	59	
59	SOILING		A		В		С		
60	GRAFFITI								
61	INCLUSION								
62	INFILL								
-									

			1. GENERAL DATA							
NUMBER OF PARTNER:	P1, P2	P1, P2								
TYPE OF WORK:	Mural									
COUNTRY:	Italy									
CITY:	Turin									
ADDRESS:	Corso Valdocco	- corner Via Santa (Chiara							
OWNER / CUSTODIAN:	Turin Municipal	ity								
LEGAL PROTECTION:	-									
ARTIST:	Various									
TITLE OF THE WORK:	Memorial Thyss	en victims tragedy								
YEAR OF EXECUTION:	2008									
MATERIALS:	Paint, plaster									
DIMENSIONS (cm):	Hight: 300	Width: 1000	Depth:							
	2	2. DESCRIPTIO	ON OF THE PROBLEM (DEGRADATION)							
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE, 1	TECHNOLOGY AND LOCATION OF THE OBJECT)							
FACTORS RELATED TO THE CONSTRUCTION BASE										

	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATER	IALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
MATER	IALS USED TO MAKE POLICHROMY (PAINTING	A background layer of acrylic paint was detected within the preliminary diagnostic
MATER	IALS)	campaign: this layer has probably been applied as a finishing painting layer of the wall,
		before the realisation of the mural. (see correspondent analytical table - light yellow
		paint layer n. 18)
	BINDER	
	PIGMENT	
MATER	IAL USED TO PROTECT THE SURFACE	
LOCATI	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
AFFECT	ING ITS LASTING	
	SETTING OF FOUNDATIONS	

	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	Due to a change in the gate position, the central part of the wall has been later
		constructed. This gave origin to significant decay, related to mechanical stress, nearby
		the joint between the original part and the later one.
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	In the lower part of the wall, a monocrome light grey socle, lot of tags and vandalic
		graffiti are visible. None of them overlap the upper mural, except for a red shadow and
		a white stilised design.

THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS AND/OR BUILDING INTALATIONS	Along the horizontal joint between the mural and the socle, a 2 cm overhang of the lower part is at the base of a localized accumulation of water rainfalls and snow falls. This led to water infiltration in the area surrounding the joint, as a preliminary step for further decay phenomena such as flacking, scaling, lacunas.
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	EXPOSITION ON LIGHT	The exposition to direct sunlight is one of the main causes for black and red paint fading.
	HIGH TEMPERATURE INFLUENCE	
<u>PHY</u>	SICO-CHEMICAL FACTORS	

	AIR POLLUTION	Air pollution is a relevant problem for the city of Turin, because of the large amount of fine particulate often detected in the air. As a conseguence, most of the architectural surfaces in the city centre show a superficial dark deposit, only partially adherent to
		the substrate.
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
	ANIMAL ACTIVITIES	
	MICROORGANISMS	Superficial lacunas and little abrasion of the paiting layers led to irregular superficial
		morphology that represent the perfect soil for microorganisms growth.
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
<u>ME</u>	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	
<u>BIO</u>	LOGICAL FACTORS (biological colonisation, biof ANIMAL ACTIVITIES MICROORGANISMS FUNGUS MOLDS ALGAE MOSS (lichens) PLANTS (SHRUBS, TREES) CHANICAL FACTORS MECHANICAL INJURIES ABRASIONS	film) Superficial lacunas and little abrasion of the paiting layers led to irregular superf morphology that represent the perfect soil for microorganisms growth.

	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF						
	HUMANS						
	INDUSTRIALIZATION						
<u>OTH</u>	IERS						
The c	liagnostic campaign that was carried out did not allow defini	ng the causes of deterioration unambiguously, but allowed to identify the effects of the					
deter	ioration, that are reported in the second part of the table to	gether with their location on the artwork.					
Base	d on the scientific analyses performed and the visual analysis	of the artwork, it is only possible to indicate some (not all) hypothetical causes of					
deter	deterioration, that are listed below:						
later	later conservations, vandalism, poor drainage, air pollution, biological colonization, mechanical injuries.						



SUR	FACE – LOSS OF COHESION															
1	COLLAPSE															
2	DISINTEGRATION		a	9	9	-				10						
3	POWDERING															
4	CRUSHING	-	b 9		9 10		10	0	10	10	10	9	10	14		
_				5	, 10	9	10	3	10	9	10	9	10		-	
5	CRUMBLING		с		9		з		5							
6	TEARING					5	9	_			6		-		_	
7	CUTTING		А			Б		_			L					
8	INCISION															
9	FRACTURING		NO	TES: c	racking is	main bro	ily vísi wn pa	ble ir aintir	n wh ng la	nite, ivers	light :	yello	wan	d lig	ght	
10										.,						
10	CRACKING															
11	SPLITTING															
12	OPEN JOINT															
13	DELAMINATION															
14	FLAKING															
15	SCALING															
SUR	FACE – LOSS OF MATERIAL															
16																

17	LACUNA								
18	EROSION	a		17					
19	ABRASION	b		17					
20	WEAR		17	17	17	17	17	17	
21	CHAFE	с		17 16			17	16	
22	ROUNDED		-				-		
23	PERFORATION		A		В		С		
24	PITTING								
25	GALLERY								
26	CAVITY								
27	SCRATCH								
<u>SURF</u>	ACE – DEFORMATION								
28	DEFORMATION								
29	SHRINKAGE								
30	SWELLING								
31	DEPRESSION								
32	BLISTERING								

33	BUCKLING								
34	WARPING	a							
35	TORSION	b							
36	BEND						33		
37	ROUGHENED	с							
		ļ	A		В		с		
SURF	ACE – OPTICAL ALTERNATION								
38	CHROMATIC ALTERATION								
39	DARKENING	a			40				
40	FADING					40			
41	YELLOWING	a			40	40			
42	BLOOMISH			43					
43	STAINING	, i		42		43	43		
44	SPOTTING	ļ	4		В		С		
SURF	ACE – CHEMICAL AND								
BIOL	OGICAL ALTERNATION								
45	BURNING								
46	CORROSION								

47	CRUST								
48	EFFLORESCENCE	a	50	50	50	50	50	50	
49	EMBRITTLED								
50	EXUDATION	b							
51	ρατινα								
51		с		50	40	40			
52	BIOLOGICAL COLONISATION		<u>ــــــــــــــــــــــــــــــــــــ</u>	52	40 B	40	C		
53	BIOFILM		~		b		C		
SUR	ACE – ADDITION OF								
<u>SUBS</u>	STANCES								
54	DEPOSIT	a							
55	DUST								
56	ACCRETION	b						<u></u>	
57	CONCRETION			60 60	60	60	60	60 60	
<u>со</u>		с	59	59	59	59	59	59	
20	FILIVI		^		D		C		
59	SOILING		A		D		C		
60	GRAFFITI								
61	INCLUSION								
62	INFILL								

	1. GENERAL DATA	
NUMBER OF PARTNER:	P1, P2	
TYPE OF WORK:	Mural	
COUNTRY:	Italy	
CITY:	Turin	
ADDRESS:	Via Spalato 59	
OWNER / CUSTODIAN:	MYCROM Art S.r.L.	
LEGAL PROTECTION:	-	
ARTIST:	TRULY DESIGN	
TITLE OF THE WORK:	No title	
YEAR OF EXECUTION:	2010/2018. The original mural was commissioned in 2010. The mural was entirely repainted by the same artists in November 2018, immediately after the sampling by the CAPuS team.	
MATERIALS:	Paint, plaster	
DIMENSIONS (cm):	Hight: 300/500 Width: 1000 Depth:	
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)	
PRIMARY CAUSES (RE	LATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)	

<u>LAT</u>	ER INTERFERENCES	
THE	RMAL-HUMIDITY FACTORS	
<u>THE</u>	RMAL FACTORS	
<u>PHY</u>	SICO-CHEMICAL FACTORS	
<u>BIO</u>	LOGICAL FACTORS (biological colonisation, biofilm	<u>)</u>
MEC	CHANICAL FACTORS	
<u>OTH</u>	IERS	·

The mural was entirely repainted in November 2018, immediately after the sampling by the CAPuS team.

To date, the new mural shows no signs of deterioration.



SURFACE – LOSS OF COHESION	
1	COLLAPSE
2	DISINTEGRATION
3	POWDERING
4	CRUSHING
5	CRUMBLING
6	TEARING
7	CUTTING
8	INCISION
9	FRACTURING
10	CRACKING
11	SPLITTING
12	OPEN JOINT
13	DELAMINATION
14	FLAKING
15	SCALING
SURFACE – LOSS OF MATERIAL	
16	LOSS

17	LACUNA							
18	EROSION	a						
19	ABRASION	h						
20	WEAR							
21	CHAFE	c			17			
22	ROUNDED		-					-
23	PERFORATION		A	В		С]
24	PITTING							
25	GALLERY							
26	CAVITY							
27	SCRATCH							
SURF	ACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							
33	BUCKLING							
-------------	----------------------							
34	WARPING							
35	TORSION							
36	BEND							
37	ROUGHENED							
SURF	ACE – OPTICAL							
<u>ALTE</u>	RNATION							
38	CHROMATIC ALTERATION							
39	DARKENING							
40	FADING							
41	YELLOWING							
42	BLOOMISH							
43	STAINING							
44	SPOTTING							
SURF	ACE – CHEMICAL AND							
<u>BIOL</u>	OGICAL ALTERNATION							
45	BURNING							
46	CORROSION							
47	CRUST							

48	EFFLORESCENCE
49	EMBRITTLED
50	EXUDATION
51	PATINA
52	BIOLOGICAL COLONISATION
53	BIOFILM
SURF	ACE – ADDITION OF
<u>SUBS</u>	STANCES
54	DEPOSIT
55	DUST
56	ACCRETION
57	CONCRETION
58	FILM
59	SOILING
60	GRAFFITI
61	INCLUSION
62	INFILL

1. GENERAL DATA								
NUMBER OF PARTNER:	P1, P2	P1, P2						
TYPE OF WORK:	Mural	Mural						
COUNTRY:	Italy							
CITY:	Turin							
ADDRESS:	Via Ceres 13B							
OWNER / CUSTODIAN:	MAU (Urban Ar	MAU (Urban Art Museum)						
LEGAL PROTECTION:	-	-						
ARTIST:	Elisabetta VIAR	ENGO MINIOTTI						
TITLE OF THE WORK:	Bosco							
YEAR OF EXECUTION:	1995							
MATERIALS:	Paint, plaster							
DIMENSIONS (cm):	Hight: 150	Width: 300	Depth:					
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)								
PRIMARY CAUSES (RE	LATED TO THE	<u>TECHNIQUE,</u>	TECHNOLOGY AND LOCATION OF THE OBJECT)					

LATER	LATER INTERFERENCES					
THERMAL-HUMIDITY FACTORS						
THERMAL FACTORS						
PHYSIC	PHYSICO-CHEMICAL FACTORS					
BIOLOGICAL FACTORS (biological colonisation, biofilm)						
MECHANICAL FACTORS						
OTHER	OTHERS					

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

water leak from the gutter.



SURF	ACE – LOSS OF COHESION								
1	COLLAPSE								
2	DISINTEGRATION	a	14	9				9	
3	POWDERING		14	14					
4		b	14					9	
4	СКОЗПІНА				9			9	
5	CRUMBLING	c		9	5	9	9	5	
6	TEARING				_		-		
7	CUTTING		A		В		С		
8	INCISION								
9	FRACTURING								
10	CRACKING								
11	SPLITTING								
12	OPEN JOINT								
13	DELAMINATION								
14	FLAKING								
15	SCALING								
SURF	ACE – LOSS OF MATERIAL								
16	LOSS								

17	LACUNA		17	17				
18	EROSION	a	17	17				
19	ABRASION	h						-
20	WEAR							1
21	CHAFE	с						
22	ROUNDED							-
23	PERFORATION		A		В	С]
24	PITTING							
25	GALLERY							
26	CAVITY							
27	SCRATCH							
SURF	ACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							

33	BUCKLING		33					-
34	WARPING	a	33	33				
35	TORSION		33					-
36	BEND	b						
37	ROUGHENED	c						
			A		В	с		
SURF	ACE – OPTICAL							
ALTE	RNATION							
38	CHROMATIC ALTERATION							
39	DARKENING							
40	FADING							
41	YELLOWING							
42	BLOOMISH							
43	STAINING							
44	SPOTTING							
SURF BIOL	ACE – CHEMICAL AND OGICAL ALTERNATION							
45	BURNING							

46	CORROSION							
47	CRUST	a			50 50	50	50	
48	EFFLORESCENCE						50	
ЛО		b						
50	EXUDATION	c						
51	PATINA		A	B		C		
52	BIOLOGICAL COLONISATION			b		C		
53	BIOFILM	NUTES: 168	aching near the gut	ter				
<u>SURF</u>	SURFACE – ADDITION OF							
<u>SUBS</u>	STANCES					57		
54	DEPOSIT	a						
								1
55	DUST							
55 56	DUST ACCRETION	b						
55 56 57	DUST ACCRETION CONCRETION	b						
55 56 57	DUST ACCRETION CONCRETION	b						
55 56 57 58	DUST ACCRETION CONCRETION FILM	b c	A	B		C		
55 56 57 58 59	DUST ACCRETION CONCRETION FILM SOILING	c	A	B		с		
55 56 57 58 59 60	DUST ACCRETION CONCRETION FILM SOILING GRAFFITI	c	A	B		с		
55 56 57 58 59 60 61	DUST ACCRETION CONCRETION FILM SOILING GRAFFITI INCLUSION	c	A	B		с		

62	INFILL	

1. GENERAL DATA								
NUMBER OF PARTNER:	P1, P2	P1, P2						
TYPE OF WORK:	Mural	Mural						
COUNTRY:	Italy							
CITY:	Turin							
ADDRESS:	Corso Palermo 1	24						
OWNER / CUSTODIAN:	Turin unicipality							
LEGAL PROTECTION:	-	-						
ARTIST:	MILLO							
TITLE OF THE WORK:	No title							
YEAR OF EXECUTION:	2014							
MATERIALS:	Paint, plaster							
DIMENSIONS (cm):	Hight: 1200	Width: 500	Depth:					
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)								
PRIMARY CAUSES (RE	PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)							
FACTORS RELATED TO	THE CONSTRUCT	ION BASE						

CONCRETE	
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	
METAL	
OTHER	
MATERIALS USED FOR COATING, PLASTER	
BINDER	
FILLER	
MATERIALS USED TO MAKE POLICHROMY (PAINTING MATERIALS)	
BINDER	
PIGMENT	
MATERIAL USED TO PROTECT THE SURFACE	
LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
SETTING OF FOUNDATIONS	
UNSTABLE SUPPORT	

	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	At the base of the painted facade insists a little public flowerbed: the presence of almost 50 cm of earth in the lower part of the wall, led to capillary moisture from the ground. Moreover, a thin layer of earth deposit is visible in the lower part of the mural.
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	

LATER INTERFERENCES

	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Vandalism is a very relevant problem for Millo mural conservation: glass bottles, sigarettes and generic waste are left in the public flowerbed, below the murals, almost every night. Moreover, in the centre of the mural, are visible some stains of purple and pink paint, voluntary thrown on the painted surface.
<u>THE</u>	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	See "Type of ground"

	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	EXPOSITION ON LIGHT	
	HIGH TEMPERATURE INFLUENCE	
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	Air pollution is a relevant problem for the city of Turin, because of the large amount of
		fine particulate often detected in the air. As a conseguence, most of the architectural
		surfaces in the city centre show a superficial dark deposit, only partially adherent to
		the substrate.
	SALT IN THE AIR	

	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
	ANIMALACTIVITIES	
	MICROORGANISMS	Superficial lacunas and little abrasion of the paiting layers led to irregular superficial morphology that represent the perfect soil for microorganisms growth.
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
<u>MEC</u>	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	
<u>OT</u>	IERS	

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

vandalism, capillary moisture, biological colonization.



<u>SURF</u>	ACE – LOSS OF COHESION											
1	COLLAPSE											
2	DISINTEGRATION	a										
3	POWDERING			14								
Л	CRUSHING	b	3	15		14		1.4				
4	crosning		<u> </u>	35			10	14	14	9		
5	CRUMBLING	(14	2	10 5		14		14		14	
5	TEARING			10				10		14		
	CUTTING		A				В			С		
	INCISION											
I	FRACTURING											
D	CRACKING											
L	SPLITTING											
2	OPEN JOINT											
3	DELAMINATION											
4	FLAKING											
.5	SCALING											
SURF	ACE – LOSS OF MATERIAL											
16	LOSS											

17	LACUNA							
18	EROSION	a						
19	ABRASION	24*						
20	WEAR	24*						
21	CHAFE	17* 16* с	17					
22	ROUNDED	17*	17					
23	PERFORATION		A	В	C			J
24	PITTING	NOTES: or of	the left side is an ivy. *Deca	visible a wide are y phenomena in:	ea of pitting, prosisting on the w	obably related to th all on the left side (ne previous of the mura	; presence al.
25	GALLERY							
26	CAVITY							
27	SCRATCH							
<u>SUR</u>	FACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							

33	BUCKLING							
34	WARPING	a						
35	TORSION			~~				
36	BEND	d		33 28		28		
37	ROUGHENED	c	33	33				
			A	33	В	с		
								<i>.</i>
	RNATION							
38	CHROMATIC ALTERATION							
39	DARKENING							
40	FADING							
41	YELLOWING							
42	BLOOMISH							
43	STAINING							
44	SPOTTING							
SURF	ACE – CHEMICAL AND							
BIOL	OGICAL ALTERNATION							
45	BURNING							

46	CORROSION								
47	CRUST	a							
48	EFFLORESCENCE								
49	EMBRITTLED	b		48					
50	EXUDATION		48						
51	PATINA		0	48					
52	BIOLOGICAL COLONISATION		A		В		С		
53	BIOFILM								
SUR	ACE - ADDITION OF								
<u>SUB</u>	STANCES								
54	DEPOSIT	a							
55	DUST				60	60			
56	ACCRETION	b					60		
57	CONCRETION					60	00		
58	FILM	C	59	59	59	59	59	59	
59	SOILING		A		В		С		
60	GRAFFITI								
61	INCLUSION								
62	INFILL								

			1. GENERAL DATA
NUMBER OF PARTNER:	P1, P2		
TYPE OF WORK:	Mural		
COUNTRY:	Italy		
CITY:	Turin		
ADDRESS:	Piazza Campido	glio - corner Via N	Iusiné
OWNER / CUSTODIAN:	MAU (Urban Art	: Museum)	
LEGAL PROTECTION:	-		
ARTIST:	SPIDER, Vito NA	VOLIO	
TITLE OF THE WORK:	Guardare oltre		
YEAR OF EXECUTION:	2015		
MATERIALS:	Paint, bricks		
DIMENSIONS (cm):	Hight: 500	Width: 250	Depth:
	2	2. DESCRIPTI	ON OF THE PROBLEM (DEGRADATION)
PRIMARY CAUSES (RE	LATED TO THE	<u>TECHNIQUE,</u>	TECHNOLOGY AND LOCATION OF THE OBJECT)
NUMBER OF PARTNER: TYPE OF WORK: COUNTRY: CITY: ADDRESS: OWNER / CUSTODIAN: LEGAL PROTECTION: ARTIST: TITLE OF THE WORK: YEAR OF EXECUTION: MATERIALS: DIMENSIONS (cm): PRIMARY CAUSES (RI			

LATER	INTERFERENCES	
THERM	AL-HUMIDITY FACTORS	
THERM	<u>AL FACTORS</u>	
PHYSIC	CO-CHEMICAL FACTORS	
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)
MECHA	ANICAL FACTORS	
OTHER	<u>RS</u>	

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

biological colonization, mechanical factors due to public access and attendance of large groups of people.



<u>SUR</u>	ACE – LOSS OF COHESION								
1	COLLAPSE								
2	DISINTEGRATION	a	1						
2				+ 14			14	1	
5		b					14	14	
4	CRUSHING		14				14	1 14	
5	CRUMBLING		14	1	14	14	14	14	
6	TEARING	,	14	14	1,				
7	CUTTING		A		В		С		
8	INCISION								
9	FRACTURING								
10	CRACKING								
11	SPLITTING								
12	OPEN JOINT								
13	DELAMINATION								
14	FLAKING								
15	SCALING								
SUR	ACE – LOSS OF MATERIAL								
16	LOSS								

17	LACUNA	
18	EROSION	a la
19	ABRASION	17 17 17
20	WEAR	17 17 17 17 17 17 17 17 17 17 17 17 17 1
21	CHAFE	c 17 17
22	ROUNDED	17 17 17
23	PERFORATION	A B C
24	PITTING	
25	GALLERY	
26	CAVITY	
27	SCRATCH	
SURF	ACE – DEFORMATION	
28	DEFORMATION	
29	SHRINKAGE	
30	SWELLING	
31	DEPRESSION	
32	BLISTERING	

33	BUCKLING
34	WARPING
35	TORSION
36	BEND
37	ROUGHENED
<u>SUR</u>	FACE – OPTICAL
<u>ALTE</u>	RNATION
38	CHROMATIC ALTERATION
39	DARKENING
40	FADING
41	YELLOWING
42	BLOOMISH
43	STAINING
44	SPOTTING
<u>SUR</u>	FACE – CHEMICAL AND
BIOL	OGICAL ALTERNATION
45	BURNING
46	CORROSION
47	CRUST

48	EFFLORESCENCE								-	
49	EMBRITTLED	a								
50	EXUDATION								-	
51	PATINA	b								
52	BIOLOGICAL COLONISATION									
53	BIOFILM	C			52	52		52	-	
		A	•		В		С			
SURF	FACE - ADDITION OF									
<u>SUBS</u>	STANCES	Г							1	
54	DEPOSIT	a								
55	DUST									
56	ACCRETION	b								
57	CONCRETION	T								
58	FILM	 с	54	54	54	54	54	54	-	
59	SOILING	A			В		С			
60	GRAFFITI									
61	INCLUSION									

1. GENERAL DATA											
NUMBER OF PARTNER:	P1, P2										
TYPE OF WORK:	Gate										
COUNTRY:	Italy										
CITY:	Turin										
ADDRESS:	Cso Farini - corr	ner Largo Berardi									
OWNER / CUSTODIAN:	Turin municipali	ity									
LEGAL PROTECTION:	-										
ARTIST:	HALO HALO										
TITLE OF THE WORK:	No title										
YEAR OF EXECUTION:	2010										
MATERIALS:	Paint, metal										
DIMENSIONS (cm):	Hight: 200	Width: 400	Depth:								
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)											
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)								

LATER	INTERFERENCES							
THERM	AL-HUMIDITY FACTORS							
THERM	<u>AL FACTORS</u>							
PHYSIC	CO-CHEMICAL FACTORS							
BIOLOGICAL FACTORS (biological colonisation, biofilm)								
MECH	ANICAL FACTORS							
OTHER	<u>RS</u>							

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

reparations, vandalism, corrosion, mechanical injuries.



SUR	FACE – LOSS OF COHESION							
1	COLLAPSE							
2	DISINTEGRATION	a						
3	POWDERING							
4	CRUSHING	b						
5	CRUMBLING		,					
6	TEARING			8	\$	8		
7	CUTTING		A		В	С		
8	INCISION							
9	FRACTURING							
10	CRACKING							
11	SPLITTING							
12	OPEN JOINT							
13	DELAMINATION							
14	FLAKING							
15	SCALING							
SURFACE – LOSS OF MATERIAL								
16	LOSS							
17	LACUNA							
------	-------------------	---	---	---	---	----	---	--
18	EROSION	a						
19	ABRASION	h					-	
20	WEAR							
21	CHAFE	с						
22	ROUNDED		-			17	_	
23	PERFORATION		A	В	С]	
24	PITTING							
25	GALLERY							
26	CAVITY							
27	SCRATCH							
SURF	ACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							

33	BUCKLING									
34	WARPING									
35	TORSION									
36	BEND									
37	ROUGHENED									
SURF	ACE – OPTICAL									
<u>ALTE</u>	<u>RNATION</u>									
38	CHROMATIC ALTERATION	a		41		38	38			
39	DARKENING									
40	FADING	b	41	38	38	41	38			
41	YELLOWING		00							
42	BLOOMISH	с	38					28		
43	STAINING		A		В		с			
44	SPOTTING									
SURF	ACE – CHEMICAL AND									
BIOL	OGICAL ALTERNATION									
45	BURNING									
46	CORROSION									
47	CRUST									

48	EFFLORESCENCE									
49	EMBRITTLED	a						46		
50	EXUDATION									
51	ΡΑΤΙΝΑ	b		16			46	16		
5-				40				40		
52	BIOLOGICAL COLONISATION	с								
53	BIOFILM		46 A	46	В			с	46 46	
	<u>FACE - ADDITION OF</u>									
300										
54	DEPOSIT	d								
55	DUST		54	-	5	54			60	
56	ACCRETION	b			60	60	54 60	60	60 60	
57	CONCRETION				00	00		60	60	•
58	FILM	с					54		54	
50	SOULING SOULING		A 54	•	В	54		с		
59	SUILING				-			-		
60	GRAFFITI									
61	INCLUSION									
62	INFILL									

			1. GENERAL DATA
NUMBER OF PARTNER:	P1, P2		
TYPE OF WORK:	Panel		
COUNTRY:	Italy		
CITY:	Turin		
ADDRESS:	Via Rocciamelon	e 7	
OWNER / CUSTODIAN:	MAU (Urban Art	Museum)	
LEGAL PROTECTION:	-		
ARTIST:	Gianni GIANASS)	
TITLE OF THE WORK:	Wanda		
YEAR OF EXECUTION:	2000		
MATERIALS:	Paint, metal		
DIMENSIONS (cm):	Hight: 80	Width: 100	Depth: 20
	2	. DESCRIPTI	ON OF THE PROBLEM (DEGRADATION)
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)

LAT	ER INTERFERENCES	
<u>THE</u>	RMAL-HUMIDITY FACTORS	
<u>THE</u>	RMAL FACTORS	
<u>PHY</u>	SICO-CHEMICAL FACTORS	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
<u>MEC</u>	CHANICAL FACTORS	
<u>OTH</u>	IERS	

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

mechanical injuries.



<u>SUR</u>	ACE – LOSS OF COHESION								
1	COLLAPSE	PANEL 1 (f	rom the lef	t)					
2	DISINTEGRATION								-
3	POWDERING	a							
4	CRUSHING							-	-
5	CRUMBLING	b		8				8	
6	TEARING							0	
7	CUTTING	с		0				0	
3	INCISION		A		В		с		
)	FRACTURING								
C	CRACKING	PANEL 2							
L	SPLITTING								
2	OPEN JOINT	а							
3	DELAMINATION							8	
4	FLAKING	b				8	8		
5	SCALING								
		c		8		8			
			A		В		С		



а								
b								
	8			8		8		
c			8		8			
	A		В		с			
PANEL 5 (g	iraffe head	1)						

		а						
		b		8				
		c	8				8	
			A		В	С	0	
<u>SUR</u>	FACE – LOSS OF MATERIAL					 		
16	LOSS	PANEL 1 (f	rom the lef	ft)				
17	LACUNA]
18	EROSION	a						
19	ABRASION	h				17		
20	WEAR					1/		
21	CHAFE	C				17		
22	ROUNDED				_			_
23	PERFORATION		A		В	С		
24	PITTING							
25	GALLERY							

26	CAVITY								
27	SCRATCH								
		PANEL 2							
		а							
		b	17			4.7			
						1/			
		c		17					
			<u> </u>		D		<i>c</i>		-
			A		В		L		l
		PANEL 3							

a					
b	17				
с				17	
	A	В	с	17	
DANEL /					

		a b c	4	B	17	C		
<u>SURF</u>	ACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							
33	BUCKLING							
34	WARPING							
35	TORSION							
36	BEND							
37	ROUGHENED							

<u>SURF</u>	ACE – OPTICAL
<u>ALTE</u>	<u>RNATION</u>
38	CHROMATIC ALTERATION
39	DARKENING
40	FADING
41	YELLOWING
42	BLOOMISH
43	STAINING
44	SPOTTING
SURF	ACE – CHEMICAL AND
<u>BIOL</u>	OGICAL ALTERNATION
45	BURNING
46	CORROSION
47	CRUST
48	EFFLORESCENCE
49	EMBRITTLED
50	EXUDATION
51	PATINA
52	BIOLOGICAL COLONISATION

53	BIOFILM									
SURE SUBS	FACE – ADDITION OF STANCES	PANEL 1 (fr	om the left))						
54	DEPOSIT									
55	DUST]	
56	ACCRETION	a								
57	CONCRETION									
58	FILM	b								
59	SOILING									
60	GRAFFITI	с	54	60		54				
61	INCLUSION		A		В		С			
62	INFILL									
		PANEL 2								

						1	i
a							
b							
				54			
(54		54	54		
	A	54	В		с С		
PANEL 5							
PANEL 5							
PANEL 5							
PANEL 5	59			59			
PANEL 5	59			59			
PANEL 5	59 59	62		59 59 59			

			1. GENERAL DATA
NUMBER OF PARTNER:	P1, P2		
TYPE OF WORK:	Bench (10 bench	nes)	
COUNTRY:	Italy		
CITY:	Turin		
ADDRESS:	Piazza Moncenis	sio	
OWNER / CUSTODIAN:	MAU (Urban Art	: Museum)	
LEGAL PROTECTION:	-		
ARTIST:	Vito NAVOLIO		
TITLE OF THE WORK:	No title		
YEAR OF EXECUTION:	2010		
MATERIALS:	Paint, wood		
DIMENSIONS (cm):	Hight: 100	Width: 150	Depth: 50
	2	2. DESCRIPTI	ON OF THE PROBLEM (DEGRADATION)
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)

LATER	INTERFERENCES	
THERM	AL-HUMIDITY FACTORS	
THERM	<u>AL FACTORS</u>	
PHYSIC	CO-CHEMICAL FACTORS	
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)
MECHA	ANICAL FACTORS	
OTHER	<u>RS</u>	

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

vandalism, mechanical injuries, abrasion, public access and attendance of large groups of people.

<u>BEN</u>	CH 1_ Warhol	
8	INCISION	19 d 17 a 17 b 29
9	FRACTURING	
10	CRACKING	
17	LACUNA	
19	ABRASION	
52	BIOLOGICAL COLONISATION	
		NOTES: one wood axe of the bench has probably been replaced with a new one (painted in black)
BEN	CH 2_HARING	
<u>BEN</u> 8	CH 2_HARING INCISION	
<u>BEN</u> 8 14	CH 2_HARING INCISION FLAKING	
<u>BEN</u> 8 14 16	CH 2_HARING INCISION FLAKING LOSS	
<u>BEN</u> 8 14 16 17	CH 2_HARING INCISION FLAKING LOSS LACUNA	
BEN 8 14 16 17 40	CH 2_HARING INCISION FLAKING LOSS LACUNA FADING	

BENCH 3_MONDRIAN	
8 INCISION	
10 CRACKING	and the second s
15 SCALING	17 15 17 15 17 10 17 2 10 17 10 17
17 LACUNA	
40 FADING	State - State - English
BENCH 4_PICASSO	15 17 15 17 15 17
8 INCISION	
9 FRACTURING	2
10 CRACKING	
15 SCALING	
	The state of the s
17 LACUNA	STATISTICS STATISTICS

BEN	CH 5_HARTUNG	× 50 45 . IN 11 / /
9	FRACTURING	
17	LACUNA	
41	YELLOWING	11
60	GRAFFITI	
		NOTES: A light brown patina, probably caused by earthy deposit, is visible on the whole surface.
		One wood axe of the bench has probably been replaced with a new one (painted in black)
BEN	CH 6_POLLOCK	
8	INCISION	
9	FRACTURING	
10	CRACKING	15 19 19 19 10 W 10 10 10
15	SCALING	
17	LACUNA	
19	ABRASION	NOTES: Abrasian is visible on the whole surface
40	FADING	
43	STAINING	

BENC	CH 7_MIRO'	ILL JULIANI BOMMINING STREET, STRE
9	FRACTURING	
10	CRACKING	
17	LACUNA	
<u>BENC</u>	CH 8_NIK DE SAINT PHALLE	
8	INCISION	
17	LACUNA	
60	GRAFFITI	
		NOTES: An altered superficial film is visible on the surface, it looks a bit yellowed.

BEN	CH 10_ROY LICHTESTEIN	
8	INCISION	
9	FRACTURING	15 9 A 17 10 10 10 10 10 10 10 10 10 10 10 10 10
15	SCALING	
17	LACUNA	
		NOTES: one wood axe of the bench has probably been replaced with a new one (painted in black)
BEN	CH 11_DEPERO	
9	FRACTURING	
15	SCALING	
17	LACUNA	
60	GRAFFITI	NOTES: an altered film (yellowed) is visible on the whole surface.

			1. GENERAL DATA
NUMBER OF PARTNER:	P1, P2		
TYPE OF WORK:	Bench		
COUNTRY:	Italy		
CITY:	Turin		
ADDRESS:	Piazza Galimbert	i	
OWNER / CUSTODIAN:	Turin municipali	ty	
LEGAL PROTECTION:	-		
ARTIST:	PAO, ETNIK, Gior	rgio BARTOCCI	
TITLE OF THE WORK:	No title		
YEAR OF EXECUTION:	2013		
MATERIALS:	Paint, concrete		
DIMENSIONS (cm):	Hight: 150	Width: 200	Depth: 200
	2	. DESCRIPTI	ON OF THE PROBLEM (DEGRADATION)
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)

LATER	INTERFERENCES	
THERM	AL-HUMIDITY FACTORS	
THERM	<u>AL FACTORS</u>	
PHYSIC	CO-CHEMICAL FACTORS	
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)
MECHA	ANICAL FACTORS	
OTHER	<u>RS</u>	

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

repainting, vandalism, biological colonization.



SUR	ACE – LOSS OF COHESION									
1	COLLAPSE	SIDE A (Pe	nguins)							
2	DISINTEGRATION									
3	POWDERING				14					
4	CRUSHING	b		14	Ļ					
5	CRUMBLING									
6	TEARING	0								
7	CUTTING		Δ		в		C			
8	INCISION				U		c			
9	FRACTURING		(nhant)							
10	CRACKING									
11	SPLITTING	а								
12	OPEN JOINT		14	14 I	14					
13	DELAMINATION	b		14		14				
14	FLAKING		14	14	14					
15	SCALING	C		14				14		
			A	14	В	1	С			
<u>SURI</u>	ACE – LOSS OF MATERIAL									

16	LOSS	SIDE A (Pen	iguins)						
17	LACUNA								
18	EROSION								
19	ABRASION	a			1 8 19				
20	WEAR			17				18 19	
21	CHAFE	b	18	17	17 18 19	17	18 19	17	
22	ROUNDED			1.5	10 19		10 19	18 16	
23	ΡΕΒΕΩΒΑΤΙΩΝ	с	18	19					
23			A		В		с		
24	PITTING	NOTES: ero	sion is visi	ble in the a	areas wher	e water acc	cumulates.		
25	GALLERY								
26	CAVITY		abant)						
27	SCRATCH					1	1		
		а							
			17						
			17			17	18		
		b		17	17	17		19 17 19	
				18	19	17		17 18	
		с		17				17 18	
			17	17 18 19		17	18 18	19	
			A		В		С		

SURFACE – DEFORMATION		
28	DEFORMATION	
29	SHRINKAGE	
30	SWELLING	
31	DEPRESSION	
32	BLISTERING	
33	BUCKLING	
34	WARPING	
35	TORSION	
36	BEND	
37	ROUGHENED	
SURF	ACE – OPTICAL	
<u>ALTE</u>	RNATION	SIDE A (Penguins)
38	CHROMATIC ALTERATION	
39	DARKENING	
40	FADING	
41	YELLOWING	
42	BLOOMISH	

43	STAINING									-		
44	SPOTTING	a										
		b		40				40]		
								40				
		-										
		L L										
			А		В		с					
SURI	ACE – CHEMICAL AND											
BIOL	OGICAL ALTERNATION											
		SIDE A (Pe	SIDE A (Penguins)									
45	BURNING											
46	CORROSION	a		50								
47	CRUST			52	52	52						
		b		52			52					
48	EFFLORESCENCE		52					52				
49	EMBRITTLED		52							-		
50	EXUDATION	c						52				
- 4			A		В		с					
51	ΡΑΤΙΝΑ				1	1	1	1		,		
52	BIOLOGICAL COLONISATION											
53	BIOFILM	SIDE B (Elephant)										

I		a			52		52	
							52	
						52 52		
		b	52					52
			52	52				F2 F2
				52			52	52 52
		L L		52	52	52	52	52
			A	02	В		с	
SUR	FACE - ADDITION OF							
<u>3003</u>	DIANCES	SIDE A (Pe	nguins)					
54	DEPOSIT							
	DUST							
55	DOST	a		60		60		
56	ACCRETION				60			60
F7	CONCRETION			60		60	6	0
57	CONCRETION	b			60			
58	FILM			59				
50	SOUNC					60)	
59	SUILING	с	59					
60	GRAFFITI			59	-		59	59
C1			A		В		С	
61	INCLUSION							
62	INFILL							

SIDE B (Ele	SIDE B (Elephant)					
			60		57	
	60		60	60	57	
		60			60	
b				60		
		60				
c						
	A		В		С	

1. GENERAL DATA									
NUMBER OF PARTNER:	P1, P2								
TYPE OF WORK:	Mural								
COUNTRY:	Italy								
CITY:	Turin								
ADDRESS:	Via Passo Buole	- corner Via Casar	าล						
OWNER / CUSTODIAN:	Turin municipali	Turin municipality							
LEGAL PROTECTION: -									
ARTIST:	ROJO ROMA								
TITLE OF THE WORK:	Il cinghiale (the v	wild boar)							
YEAR OF EXECUTION:	2012	2012							
MATERIALS:	Paint, concrete								
DIMENSIONS (cm):	Hight: 400	Width: 500	Depth:						
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)									
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)						
LATER	LATER INTERFERENCES								
-----------------	--	------	--	--	--	--	--	--	--
THERM	AL-HUMIDITY FACTORS								
THERMAL FACTORS									
PHYSIC	PHYSICO-CHEMICAL FACTORS								
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)							
MECHA	MECHANICAL FACTORS								
OTHER	OTHERS								

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

vandalism, percolation from neon light.



<u>SURF</u>	ACE – LOSS OF COHESION								
1	COLLAPSE								
2	DISINTEGRATION	a							
3	POWDERING				9	9			
4	CRUSHING	b		9		14 14 14	. 14		
5	CRUMBLING					14		9	
6	TEARING								
7	CUTTING		A		В		С		
8	INCISION								
9	FRACTURING								
10	CRACKING								
11	SPLITTING								
12	OPEN JOINT								
13	DELAMINATION								
14	FLAKING								
15	SCALING								
<u>SURF</u>	ACE – LOSS OF MATERIAL								
16	LOSS								

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

17	LACUNA							
18	EROSION	a			17			
19	ABRASION	h		17	17	17	17	-
20	WEAR			17		17		-
21	CHAFE	c	:					
22	ROUNDED				-			_
23	PERFORATION		A		В		С	
24	PITTING							
25	GALLERY							
26	CAVITY							
27	SCRATCH							
SURF	ACE – DEFORMATION							
28	DEFORMATION							
29	SHRINKAGE							
30	SWELLING							
31	DEPRESSION							
32	BLISTERING							

33	BUCKLING							
34	WARPING							
35	TORSION							
36	BEND							
37	ROUGHENED							
SURF	ACE – OPTICAL							
ALTE	RNATION							
38	CHROMATIC ALTERATION	 a						
39	DARKENING							
40	FADING	b						
41	YELLOWING							
42	BLOOMISH	c	41			41		
43	STAINING	A		В	С			
44	SPOTTING							
SUR	ACE – CHEMICAL AND							
<u>BIOL</u>	OGICAL ALTERNATION							
45	BURNING							
46	CORROSION							
47	CRUST							

48	EFFLORESCENCE								
49	EMBRITTLED								
50	EXUDATION								
51	PATINA								
52	BIOLOGICAL COLONISATION								
53	BIOFILM								
<u>SURI</u>	FACE - ADDITION OF								
<u>SUBS</u>	STANCES			63	63			1	
54	DEPOSIT	a		63	63				
55	DUST					63	63		
55		b					63	-	
50	ACCRETION		60	60	60		63		
57	CONCRETION			60			63	 -	
58	FILM	c	63	63	63	63	63		
59	SOILING		A		В		С		
60	GRAFFITI								
61	INCLUSION								
62	INFILL								
63	OTHER: PERCOLATION								

Object number OBJ14

	1. GENERAL DATA									
NUMBER OF PARTNER:	P1, P2									
TYPE OF WORK:	Mural									
COUNTRY:	Italy	taly								
CITY:	Turin	urin								
ADDRESS:	Corso Bramante	orso Bramante								
OWNER / CUSTODIAN:	Turin municipalit	ty								
LEGAL PROTECTION:	-									
ARTIST:	Various	Various								
TITLE OF THE WORK:	No title									
YEAR OF EXECUTION:	2010									
MATERIALS:	Paint, concrete									
DIMENSIONS (cm):	Hight: 300	Width: 1000	Depth:							
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)										
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE, T	ECHNOLOGY AND LOCATION OF THE OBJECT)							

LATER	LATER INTERFERENCES								
THERM	AL-HUMIDITY FACTORS								
THERMAL FACTORS									
PHYSIC	PHYSICO-CHEMICAL FACTORS								
BIOLO	GICAL FACTORS (biological colonisation, biof	ilm)							
MECHA	MECHANICAL FACTORS								
OTHER	OTHERS								

The diagnostic campaign that was carried out did not allow defining the causes of deterioration unambiguously, but allowed to identify the effects of the deterioration, that are reported in the second part of the table together with their location on the artwork.

Based on the scientific analyses performed and the visual analysis of the artwork, it is only possible to indicate some (not all) **hypothetical** causes of deterioration, that are listed below:

air pollution, percolation from the gutter, animal activities.



<u>SURF</u>	ACE – LOSS OF COHESION							
1	COLLAPSE							
2	DISINTEGRATION	a		10	15		10	
3	POWDERING				15			
4	CRUSHING	b		10		10	10	
5	CRUMBLING			15				
6	TEADING	с		10	15	10		
_			A		B		с	
7	CUTTING							
8	INCISION							
9	FRACTURING							
.0	CRACKING							
1	SPLITTING							
2	OPEN JOINT							
.3	DELAMINATION							
.4	FLAKING							
L5	SCALING							
SURF	ACE – LOSS OF MATERIAL							
.6	LOSS							

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

17	LACUNA				17		
18	EROSION	a			17	17	
19	ABRASION	h		17			-
20	WEAR	5		1,			
21	CHAFE	с	17		17		
22	ROUNDED				_		-
23	PERFORATION		A		В	С]
24	PITTING						
25	GALLERY						
26	CAVITY						
27	SCRATCH						
SURF	ACE – DEFORMATION						
28	DEFORMATION						
29	SHRINKAGE						
30	SWELLING						
31	DEPRESSION						
32	BLISTERING						

33	BUCKLING
34	WARPING
35	TORSION
36	BEND
37	ROUGHENED
SURF	ACE – OPTICAL
<u>ALTE</u>	RNATION
38	CHROMATIC ALTERATION
39	DARKENING
40	FADING
41	YELLOWING
42	BLOOMISH
43	STAINING
44	SPOTTING
SURF	ACE – CHEMICAL AND
<u>BIOL</u>	OGICAL ALTERNATION
45	BURNING
46	CORROSION
47	CRUST

48	EFFLORESCENCE									
49	EMBRITTLED									
50	EXUDATION									
51	PATINA									
52	BIOLOGICAL COLONISATION									
53	BIOFILM									
SURF	ACE – ADDITION OF									
<u>SUBS</u>	<u>STANCES</u>		54	54		54		54	54	1
54	DEPOSIT	a			64	1			63	
55	DUST									
56	ACCRETION	b		63					63	
57	CONCRETION			63						
58	FILM	с	54 54	54 54	54	64	54 54	54	54	
59	SOILING		A	51	В			C C		
60	GRAFFITI	NOTES: 63	percolatior	n of water v	with earth	ny dep	posit fro	om the g	utter; 64: ani	mal faeces
61	INCLUSION									
62	INFILL									
63	OTHER: PERCOLATION									
64	OTHER: ANIMAL FAECES									

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

CESMAR7 AND AN.T.A.RES

CAPuS PROJECT – CONDITION REPORT (WALL PAINTING)

1. GENERAL DATA									
NUMBER OF PARTNER:	CESMAR7 (P3) A	N.T.A.RES (P4)							
TYPE OF WORK:	Mural painting	Aural painting							
COUNTRY:	Italy								
CITY:	Reggio Emilia								
ADDRESS:	Via Petrella								
OWNER / CUSTODIAN:	N: Municipality of Reggio Emilia								
LEGAL PROTECTION:	: ?								
ARTIST:	GOLA HUNDUN	GOLA HUNDUN							
TITLE OF THE WORK:	Two dragons car	rying an egg (new	v creature) (ID: Object 8)						
YEAR OF EXECUTION:	2012								
MATERIALS:	Spray paint and l	nouse paint on co	ncrete						
DIMENSIONS (cm):	Hight: 680	Width: 980	Depth:						
	2	. DESCRIPTI	ON OF THE PROBLEM (DEGRADATION)						
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)						
FACTORS RELATED TO	THE CONSTRUCT	ON BASE							
CONCRETE									
CEMENT			X (mineral oil residues)						
BRICK									
REINFORCED	CONCRETE								
WOOD									

	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X
	MATERIAL USED TO PROTECT THE SURFACE	X (peeling of the coating)
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	

THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	X
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	X (South West)
	(N, S, E, W) SEASONAL EROST PENETRATION	X2
		X: Y
		X X
		<u>^</u>
<u>P 1 1</u>	SICO-CHEIMICAL FACTORS	
	AIR POLLUTION	
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	SIOLOGICAL FACTORS (biological colonisation, biofilm)	
	ANIMAL ACTIVITIES	
	MICROORGANISMS	
	FUNGUS	X (Aureobasidium, Epicoccum, Penicillium and yeast such as Rhodotorula)
	MOLDS	
	ALGAE	

	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
ME	CHANICAL FACTORS	
	· · · · · · · · · · · · · · · · ·	
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	
	HUMANS	
	INDUSTRIALIZATION	
OTH	IERS	



FIG. 1: "TWO DRAGONS CARRYING A NEW CREATURE" BY GOLA HUNDUN IN 2012 (LEFT) AND 2019 (RIGHT). GENERAL CHROMATIC ALTERATION AND FADING. MANY CRACKS, FLAKING AND BLISTERING (BOTH COLORS AND COATING)



FIG 2: CRACKING AND FLAKING OF THE COATING (AND CONSEQUENTLY OF THE COLOR)







FIG. 5: BLISTERING (RAKING LIGHT)

SURFACE – LOSS OF COHESION	SURFACE – LOSS OF MATERIAL	SURFACE – DEFORMATION
COLLAPSE	LOSS	DEFORMATION
DISINTEGRATION	LACUNA	SHRINKAGE
POWDERING	EROSION	SWELLING
	ABRASION	DEPRESSION
	WEAR 🔲	BLISTERING
TEARING	CHAFE 🔲	BUCKLING
	ROUNDED	WARPING
	PERFORATION	TORSION
FRACTURING	PITTING	BEND
CRACKING	GALLERY	ROUGHENED
SPLITTING	CAVITY	
OPEN JOINT	SCRATCH	
FLAKING		
SCALING		
SURFACE – OPTICAL ALTERATION	SURFACE – CHEMICAL AND	SURFACE – ADDITION OF
CHROMATIC	BIOLOGICAL ALTERNATION	<u>SUBSTANCES</u>
ALTERNATION		DEPOSIT
DARKENING		DUST
FADING	CRUST	ACCRETION
	EFFLORESECENECE	
BLOOMISH	EMBRITTLED	FILM 🔲
STAINING	EXUDATION	SOILING
SPOTTING	PATINA	GRAFFITI
	BIOLOGICAL	
		INFILL
	BIOFILM	

CAPuS PROJECT – DETERIORATION (WALL PAINTING)

	1. GENERAL DATA				
NUN	1BER OF	ER OF PARTNER: CESMAR7 (P3) AN.T.A.RES (P4)			
TYPE	OF WOR	RK:	Wall painting		
COU	NTRY:		Italy		
CITY	:		Reggio Emilia		
ADDRESS: Via Selo			Via Selo		
OWN	NER / CU	STODIAN:	Cooperativa Case	e Operaie di Manca	asale e Coviolo
LEGA	AL PROTE	CTION:	?		
ARTI	ST:		KENOR		
TITLE	E OF THE	WORK:	Big Sacral Bird (II): Object 3)	
YEAF	R OF EXE	CUTION:	2010		
MAT	ERIALS:		Spray paint and h	nouse paint on wa	II
DIMENSIONS (cm): Hight: 1000 Width		Width:500	Depth:		
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)				
PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)					
	FACTOR	S RELATED TO	THE CONSTRUCTI	ON BASE	
		CONCRETE			
		CEMENT			
		BRICK			
		REINFORCED	CONCRETE		

	WOOD	
	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	X craks and and flaking starting from the plaster following the bricks pattern
		underneath, more evident then in H101 (same building)
	FILLER	X
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	

	VANDALISM	
THE	RMAL-HUMIDITY FACTORS	·
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	X
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	X
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
		X
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	X
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	X
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
	ANIMAL ACTIVITIES	
	MICROORGANISMS	
	FUNGUS	
	MOLDS	

	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	
	HUMANS	
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	



FIG 1: "BIG SACRAL BIRD" BY KENOR IN 2010 (LEFT) AND TODAY (FEBRUARY 2019); CHROMATIC ALTERATIONS, FADING ESPECIALLY OF ORANGES AND PINK (TOTAL FADING)



FIG 2: CRACKING AND FLAKING (LEFT: RAKING LIGHT) WITH LACUNAS



FIG 3: SUBFLORESCENCE



FIG. 4: CRACKING

SURFACE – LOSS OF COHESION	SURFACE – LOSS OF MATERIAL	SURFACE – DEFORMATION
COLLAPSE	LOSS	DEFORMATION
DISINTEGRATION	LACUNA	SHRINKAGE
POWDERING	EROSION	SWELLING
	ABRASION	DEPRESSION
	WEAR 🔲	BLISTERING
TEARING	CHAFE 🗌	BUCKLING
	ROUNDED	WARPING
	PERFORATION	TORSION
FRACTURING	PITTING 🗌	BEND
CRACKING	GALLERY	ROUGHENED
SPLITTING	CAVITY	
OPEN JOINT	SCRATCH	
DELAMINATION		
FLAKING		
SCALING		
SURFACE – OPTICAL ALTERNATION	SURFACE – CHEMICAL AND	SURFACE – ADDITION OF
CHROMATIC	BIOLOGICAL ALTERNATION	<u>SUBSTANCES</u>
ALTERNATION	BURNING	DEPOSIT
DARKENING		DUST
FADING	CRUST 🔲	ACCRETION
YELLOWING		
	EFFLORESCENCE	
BLOOMISH	EMBRITTLED	FILM
BLOOMISH	EMBRITTLED	FILM SOILING
BLOOMISH	EFFLORESCENCE EMBRITTLED EXUDATION PATINA	FILM SOILING GRAFFITI
BLOOMISH	EFFLORESCENCE EMBRITTLED EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION	FILM Image: Soliting SOILING Image: Soliting GRAFFITI Image: Soliting INCLUSION Image: Soliting
BLOOMISH	EFFLORESCENCE EMBRITTLED EXUDATION PATINA BIOLOGICAL COLONISATION	FILM SOILING GRAFFITI INCLUSION INFILL
BLOOMISH	EFFLORESCENCE EMBRITTLED EXUDATION PATINA BIOLOGICAL COLONISATION BIOFILM	FILM Image: Soliting SOILING Image: Soliting GRAFFITI Image: Soliting INCLUSION Image: Soliting INFILL Image: Soliting
BLOOMISH STAINING SPOTTING	EFFLORESCENCE EMBRITTLED EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION EXUDATION	FILM Image: Soliting SOILING Image: Soliting GRAFFITI Image: Soliting INCLUSION Image: Soliting









Moderate flacking



Strong flacking



TABLE 1: Loss of cohesion


TABLE 2: Loss of material

Lacuna



APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION



TABLE 3: Optical alterations

No alteration

Light chromatic alteration

Moderate chromatic alteration



Strong chromatic alteration

Light darkening

Moderate darkening

Light fading

Moderate fading

Strong fading







CAPuS PROJECT – CONDITION REPORT (WALL PAINTING)

	1. GENERAL DATA					
NUMBER OF PARTNER:		CESMAR7 (P3) AN.T.A.RES (P4)				
TYPE	OF WO	RK:	Wall painting			
COU	NTRY:		Italy			
CITY			Milano			
ADD	RESS:		Via E. Majorana/	' Via Graziano Impe	eratore	
OWN	NER / CU	STODIAN:	Municipality of N	Ailan, Area 9 cound	sil	
LEGA	AL PROTE	CTION:	?			
ARTI	ST:		Volkswriterz (ID: OBJECT 12)			
TITLE	OF THE	WORK:	NIGUARDA ANTIFASCISTA			
YEAF	R OF EXE	CUTION:	2014			
MAT	ERIALS:		Spray paint and house paint on wall			
DIMENSIONS (cm):		Hight: 460 (360?)	Width: 4276	Depth:		
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)					
PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)						
FACTORS RELATED TO THE CONSTRUCTION BASE		ION BASE				
CONCRETE						
CEMENT						
		BRICK				
		REINFORCED	CONCRETE		X Inherts conteined into the concrete bricks (metals and pieces of glass)	

	WOOD	
	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	X
	LATER CONSERVATIONS-RESTAURATIONS	

	VANDALISM	X (5 times and repainted)			
THE	THERMAL-HUMIDITY FACTORS				
	CAPILLARY MOISTURE				
	MOISTURE CONDENSATION				
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	X			
	AND/OR BUILDING INTALATIONS				
	SORPTION MOISTURE	X			
	BUILDING CONSTRUCIONAL MOISTURE				
THE	RMAL FACTORS				
	TEMPERATURE FLUCTUATIONS	X			
	(DAILY, SEASONAL, ANNUAL)				
	GEOGRAPHIC LOCATION OF THE OBJECT	X South			
	(N, S, E, W)				
		X and maxiumum exposition to atmospheric agents (isolated wall)			
<u>P 1 1</u>	SICO-CHEIVIICAL FACTORS				
	AIR POLLUTION	X			
	SALT IN THE AIR				
	SALT DISSOLUTION AND CRYSTALIZATION				
	CORROSION				
BIOLOGICAL FACTORS (biological colonisation, biofilm)					
	ANIMAL ACTIVITIES				
	MICROORGANISMS				
	FUNGUS				
	MOLDS				

	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	X leafy branch over the right area of the arwork
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	
	HUMANS	
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	·



FIG. 1: NIGUARDA ANTIFASCISTA BY VOLKWRITERZ (2014)



FIG 2 A AND B: LOSSES AND SCALING CAUSED BY UNSUITABLE REINFORCED CONCRETE BRICKS INERTS (METAL AND GLASS PIECES)



FIG. 3: REPAINTING ON VADALISATIONS AND LACUNAS



FIG. 4 : FLAKING ON REPAINTED AREAS

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION



FIG. 5: SPRAY DISCOLORATION ON THE UPPER PART WITH BLACK AREAS (RAINFALL WASHOUT)



BIOFILM

SURFACE – DEFORMATION

DEFORMATION	
SHRINKAGE	
SWELLING	
DEPRESSION	
BLISTERING	
BUCKLING	
WARPING	
TORSION	
BEND	
ROUGHENED	

<u>SURFACE – ADE</u>	DITION OF
SUBSTANCES	
DEPOSIT	
DUST	
ACCRETION	
CONCRETION	
FILM	
SOILING	
GRAFFITI	
INCLUSION	
INFILL	

CAPuS PROJECT – DETERIORATION (WALL PAINTING)

1. GENERAL DATA					
NUMBER OF PARTNER:	CESMAR7 (P3) A	N.T.A.RES (P4)			
TYPE OF WORK:	Wall painting				
COUNTRY:	Italy				
CITY:	Reggio Emilia				
ADDRESS:	Via Selo				
OWNER / CUSTODIAN:	Cooperativa Case	e Operaie di Manca	asale e Coviolo		
LEGAL PROTECTION:	?				
ARTIST:	KENOR, ZOSEN, H101, GOLA HUNDUN (Proyecto Ritual)				
TITLE OF THE WORK:	Mandala (ID: Object 6)				
YEAR OF EXECUTION:	2010				
MATERIALS:	Spray paint and house paint on wall				
DIMENSIONS (cm):	Hight: 1000	Width:1000	Depth:		
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)					
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE, 1	TECHNOLOGY AND LOCATION OF THE OBJECT)		
FACTORS RELATED TO THE CONSTRUCTION BASE					
CONCRETE					
CEMENT					
BRICK					
REINFORCED	CONCRETE				
WOOD					

	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	

THE	THERMAL-HUMIDITY FACTORS				
	CAPILLARY MOISTURE				
	MOISTURE CONDENSATION				
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS				
	AND/OR BUILDING INTALATIONS				
	SORPTION MOISTURE				
	BUILDING CONSTRUCIONAL MOISTURE				
<u>THE</u>	RMAL FACTORS				
	TEMPERATURE FLUCTUATIONS	X			
	(DAILY, SEASONAL, ANNUAL)				
	GEOGRAPHIC LOCATION OF THE OBJECT				
	(N, S, E, W) SEASONAL EROST PENETRATION				
		X			
		X			
	AIR POLLUTION				
	SALT IN THE AIR				
	SALT DISSOLUTION AND CRYSTALIZATION				
	CORROSION				
BIO	BIOLOGICAL FACTORS (biological colonisation, biofilm)				
	ANIMAL ACTIVITIES				
	MICROORGANISMS				
	FUNGUS				
	MOLDS				
	ALGAE				

	MOSS (lichens)					
	PLANTS (SHRUBS, TREES)					
ME	MECHANICAL FACTORS					
	MECHANICAL INJURIES					
	ABRASIONS					
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF					
	HUMANS					
	INDUSTRIALIZATION					
<u>OT</u>	IERS					



Fig. 1: "MANDALA" BY KENOR, ZOSEN, GOLA HINDUN AND H101 IN 2010 (LEFT) AND 2019 (RIGHT). GENERAL FADING (TOTAL FOR ONE DARK PINK) AND CHROMATIC ALTERATION FOR DARK ORANGE AND PLUM PURLPLE (THE ONE AROUND THE CENTRAL WINDOW)



FIG. 2: "MANDALA" BY KENOR, ZOSEN, GOLA HINDUN AND H101 IN 2010 (LEFT) AND 2019 (RIGHT), PARTICULARS. GENERAL FADING (TOTAL FOR ONE DARK PINK) AND CHROMATIC ALTERATION FOR DARK ORANGE AND PLUM PURLPLE (THE ONE AROUND THE CENTRAL WINDOW)

 \Box



APPENDIX:



Cracking



Moderate flacking



TABLE 2: Optical alterations

No alteration

No information

Light chromatic alteration Moderate chromatic alteration Strong chromatic

Light



alteration darkening

Moderate darkening

Light fading

Moderate fading

Strong fading



CAPuS PROJECT – DETERIORATION (WALL PAINTING)

	1. GENERAL DATA				
NUMBER OF PARTNER:		CESMAR7 (P3) – ANTARES (P4)			
TYPE OF WOR	RK:	WALL PAINTING			
COUNTRY:		Italy			
CITY:		Reggio Emilia			
ADDRESS:		Via Selo 2, 42122			
OWNER / CUS	STODIAN:	Cooperativa Case	e Operaie di Manca	asale e Coviolo	
LEGAL PROTE	CTION:	?			
ARTIST:		Gola Hundun			
TITLE OF THE	WORK:	LA GRANDE MADRE (The Big Mother) ID: OBJECT 2			
YEAR OF EXEC	CUTION:	2010			
MATERIALS:		Spray and acrylic housepaints on wall			
DIMENSIONS (cm):		Hight: 1200	Width: 600	Depth:	
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)					
PRIMARY C	AUSES (RE	LATED TO THE	TECHNIQUE, T	ECHNOLOGY AND LOCATION OF THE OBJECT)	
FACTORS	S RELATED TO	THE CONSTRUCTI	ON BASE		
CONCRETE					
CEMENT					
	BRICK				
REINFORCED CONCRETE					
	WOOD				
	METAL				

	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X partial and total fading of some colors (pink, orange) or chromatic alteration (oranges and purples)
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	

THE	THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE		
	MOISTURE CONDENSATION		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THERMAL FACTORS			
	TEMPERATURE FLUCTUATIONS	x	
		X South	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION		
	EXPOSITION ON LIGHT	X	
	HIGH TEMPERATURE INFLUENCE	X	
PHYSICO-CHEMICAL FACTORS			
	AIR POLLUTION		
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION		
BIOLOGICAL FACTORS (biological colonisation, biofilm)			
	ANIMAL ACTIVITIES		
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		

	MOSS (lichens)		
	PLANTS (SHRUBS, TREES)		
ME	MECHANICAL FACTORS		
	MECHANICAL INJURIES		
	ABRASIONS		
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF		
	HUMANS		
	INDUSTRIALIZATION		
OTHERS			



FIG 1: "THE BIG MOTHER" BY GOLA HUNDUN. LEFT: 2010. RIGHT: TODAY; GENERAL AND FADING (PARTIAL OR TOTAL)



CHROMATIC ALTERATION



FIG 2: "THE BIG MOTHER" BY GOLA HUNDUN. RIGHT: TODAY (FEBRUARY 2019); GENERAL CHROMATIC ALTERATION AND FADING (PARTIAL OR TOTAL).

SURFACE – LOSS OF COHESION	SURFACE – LOSS OF MATERIAL	SURFACE – DEFORMATION
COLLAPSE	LOSS	DEFORMATION
DISINTEGRATION	LACUNA	SHRINKAGE
POWDERING	EROSION	SWELLING
	ABRASION	DEPRESSION
	WEAR	BLISTERING
TEARING	CHAFE 🔲	BUCKLING
	ROUNDED	WARPING
	PERFORATION	TORSION
FRACTURING	PITTING	BEND
	GALLERY	ROUGHENED
SPLITTING	CAVITY	
OPEN JOINT	SCRATCH	
SCALING		
SURFACE – OPTICAL ALTERNATION	SURFACE – CHEMICAL AND	SURFACE – ADDITION OF
CHROMATIC	BIOLOGICAL ALTERNATION	<u>SUBSTANCES</u>
ALTERNATION	BURNING	DEPOSIT
DARKENING		DUST 🔲
FADING	CRUST	ACCRETION
	EFFLORESECENECE	
BLOOMISH	EMBRITTLED	FILM 🔲
STAINING	EXUDATION	SOILING
SPOTTING	PATINA	GRAFFITI 🔲
	BIOLOGICAL	INCLUSION
		INFILL 🔲
	BIOFILM	

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION



TABLE 1: Optical alterations



Light chromatic alteration

Moderate chromatic alteration



Light darkening

Moderate darkening

Light fading

Moderate fading

Strong fading





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CAPuS PROJECT – DETERIORATION (WALL PAINTING)

1. GENERAL DATA				
NUMBER OF PARTNER: CESMAR7 (P3) AN.T.A.RES (P4)		N.T.A.RES (P4)		
TYPE OF WO	RK:	Mural painting		
COUNTRY:		Italy		
CITY:		Reggio Emilia		
ADDRESS:		Via Candelù 9		
OWNER / CUSTODIAN:		Cooperativa Case Operaie di Mancasale e Coviolo		
LEGAL PROTECTION:		?		
ARTIST:		H101		
TITLE OF THE WORK:		Oriental carpet of colors (ID: Object 4)		
YEAR OF EXECUTION:		2010		
MATERIALS:		Spray paint and house paint on wall		
DIMENSIONS (cm):		Hight: 1000	Width:1000	Depth:
2. DESCRIPTION OF THE PROBLEM (DEGRADATION)				
PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)				
FACTORS RELATED TO THE CONSTRUCTION BASE				
CONCRETE				
CEMENT				
BRICK				
REINFORCED CONCRETE				

	WOOD		
	METAL		
	OTHER		
	MATERIALS USED FOR COATING, PLASTER		
	BINDER	X craks and and flaking starting from the plaster following the bricks pattern	
		underneath	
	FILLER	X	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING		
	MATERIALS)		
	BINDER	X	
	PIGMENT	X chromatic alteration, darkening and fading (complete or partial)	
	MATERIAL USED TO PROTECT THE SURFACE		
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY		
	AFFECTING ITS LASTING		
	SETTING OF FOUNDATIONS		
	UNSTABLE SUPPORT		
	FOUNDATIONS AND NONE FOUNDATIONS		
	TYPE OF GROUND		
	TECTONIC MOVES		
	VIBRATIONS, SHAKES		
	SOIL DAMP		
LATER INTERFERENCES			
	REPARATIONS		
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		

	VANDALISM			
THE	THERMAL-HUMIDITY FACTORS			
	CAPILLARY MOISTURE			
	MOISTURE CONDENSATION	X		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	? not determined		
	AND/OR BUILDING INTALATIONS			
	SORPTION MOISTURE	X		
	BUILDING CONSTRUCIONAL MOISTURE			
THERMAL FACTORS				
	TEMPERATURE FLUCTUATIONS	X		
	(DAILY, SEASONAL, ANNUAL)			
	GEOGRAPHIC LOCATION OF THE OBJECT	X North (Condensation and higher RH)		
	(N, S, E, W)	2		
		X		
PHYSICO-CHEMICAL FACTORS				
	AIR POLLUTION			
	SALT IN THE AIR			
	SALT DISSOLUTION AND CRYSTALIZATION	?		
	CORROSION			
BIOLOGICAL FACTORS (biological colonisation, biofilm)				
	ANIMAL ACTIVITIES			
	MICROORGANISMS			
	FUNGUS			
	MOLDS			

	ALGAE				
	MOSS (lichens)				
	PLANTS (SHRUBS, TREES)				
ME	MECHANICAL FACTORS				
	MECHANICAL INJURIES				
	ABRASIONS				
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF				
	HUMANS				
	INDUSTRIALIZATION				
OTHERS					



FIG. 1: H101 "ORIENTAL CARPET" IN 2010 (LEFT) AND 2019 (RIGHT)



Fig 2: Chromatic alterations (pink), fading (pale yellow in the middle) and darkening (purple and brown)



FIG 3: CRAKING (LEFT) AND FLAKING WITH LACUNAS






Cracking

Strong flacking



TABLE 2: Loss of material

Lacuna





TABLE 3: Optical alterations









Moderate darkening

Light fading

Moderate fading

Strong fading



CAPuS PROJECT – (WALL PAINTING)

	1. GENERAL DATA				
NUMBER OF PARTNER:		ARTNER:	CESMAR7 (P3) A	N.T.A.RES (P4)	
TYPE C	OF WOR	K :	Wall painting		
COUN	TRY:		Italy		
CITY:			Reggio Emilia		
ADDR	ESS:		Via Selo		
OWNE	ER / CUST	TODIAN:	Cooperativa Case	e Operaie di Manca	asale e Coviolo
LEGAL	. PROTEC	TION:	?		
ARTIST	T:		ZOSEN		
TITLE OF THE WORK:		VORK:	Il mercato ti sottomette (Economy subdues you) ID: Object 5		
YEAR OF EXECUTION:		UTION:	2010		
MATERIALS:			Spray paint and house paint on wall		
DIMENSIONS (cm):		Hight: 1200	Width:400	Depth:	
			2	. DESCRIPTIO	ON OF THE PROBLEM (DEGRADATION)
<u>PRIM</u>	IARY CA	USES (REI	LATED TO THE	TECHNIQUE, T	ECHNOLOGY AND LOCATION OF THE OBJECT)
FACTORS RELATED TO THE CONSTRUCTION BASE		ON BASE			
	CONCRETE				
	CEMENT				
	1	BRICK			
	1	REINFORCED	CONCRETE		

		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	
		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY (PAINTING	
	MATERI	ALS)	
		BINDER	X
		PIGMENT	X (strong chromatic alteration and fading)
	MATERI	AL USED TO PROTECT THE SURFACE	
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	
<u>LAT</u>	ER INTE	RFERENCES	
	REPARATIONS		
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		
	LATER C	ONSERVATIONS-RESTAURATIONS	

	VANDALISM				
THE	THERMAL-HUMIDITY FACTORS				
	CAPILLARY MOISTURE				
	MOISTURE CONDENSATION				
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS				
	AND/OR BUILDING INTALATIONS				
	SORPTION MOISTURE				
	BUILDING CONSTRUCIONAL MOISTURE				
<u>THE</u>	RMAL FACTORS				
	TEMPERATURE FLUCTUATIONS	X			
	(DAILY, SEASONAL, ANNUAL)				
	GEOGRAPHIC LOCATION OF THE OBJECT	X South			
	(N, S, E, W) SEASONAL EROST PENETRATION				
		X			
		X			
рцν					
<u>PN1</u>	SICO-CHEIMICAL FACTORS				
	AIR POLLUTION				
	SALT IN THE AIR				
	SALT DISSOLUTION AND CRYSTALIZATION				
	CORROSION				
BIOLOGICAL FACTORS (biological colonisation, biofilm)					
	ANIMAL ACTIVITIES				
	MICROORGANISMS				
	FUNGUS				
	MOLDS				

	ALGAE		
	MOSS (lichens)		
	PLANTS (SHRUBS, TREES)		
ME	CHANICAL FACTORS		
	MECHANICAL INJURIES		
	ABRASIONS		
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF		
	HUMANS		
	INDUSTRIALIZATION		
OTH	OTHERS		



FIG 1: "ECONOMY SUBDUES YOU" BY ZOSEN IN 2010 (LEFT) AND NOW (2019): STRONG CHROMATIC ALTERATION AND FADING (TOTAL AND PARTIAL)



FIG 2: COMPARISON OF THE SAME AREA IN 2010 (LEFT) AND 2019

<u>SURFACE – LOSS OF COHESION</u>	<u>SURFACE – LOSS OI</u>	<u>F MATERIAL</u>	<u>SURFACE</u>	- DEFORMATION
COLLAPSE	LOSS		DEFORMATION	
DISINTEGRATION	LACUNA		SHRINKAGE	
POWDERING	EROSION		SWELLING	
CRUSHING	ABRASION		DEPRESSION	
	WEAR		BLISTERING	
TEARING	CHAFE		BUCKLING	
	ROUNDED		WARPING	
	PERFORATION		TORSION	
FRACTURING	PITTING		BEND	
	GALLERY		ROUGHENED	
	CAVITY			
OPEN JOINT	SCRATCH			
SCALING				
SURFACE – OPTICAL ALTERNATION	<u>SURFACE – CHEMIC</u>	CAL AND	<u>SURFACE – ADD</u>	ITION OF
CHROMATIC	BIOLOGICAL ALTER	NATION	SUBSTANCES	
ALTERNATION	BURNING		DEPOSIT	П
DARKENING	CORROSION	Ē	DUST	П
FADING	CRUST	П	ACCRETION	Ē
YELLOWING	EFFLORESECENECE	Ē	CONCRETION	
BLOOMISH	EMBRITTLED		FILM	Π
STAINING	EXUDATION		SOILING	Ē
SPOTTING	PATINA		GRAFFITI	Ē
	BIOLOGICAL		INCLUSION	П
	COLONISATION		INFILL	Ē
	BIOFILM			—

* mark 😫

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION







CAPuS PROJECT – CONDITION REPORT (WALL PAINTING)

	1. GENERAL DATA				
NUM	IBER OF P	ARTNER:	CESMAR7 (P3) AN	I.T.A.RES (P4)	
TYPE	OF WOR	K:	Wall painting		
COUN	NTRY:		Italy		
CITY:			Milano		
ADDF	RESS:		Via G.C. Procaccii	ni 4	
OWN	IER / CUS	TODIAN:	Comune di Milan	0	
LEGA	L PROTEC	TION:	?		
ARTIS	ST:		Ivan, Nais, Pao, Orticanoodles		
TITLE	OF THE V	NORK:	Ubuntu (Mandela) (ID: OBJECT 13a)		
YEAR	OF EXEC	UTION:	2014		
MATERIALS:			Spray paint and house paint on wall		
DIMENSIONS (cm):		Hight: 300	Width:454	Depth:	
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)				
PRIN	PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)				
FACTORS RELATED TO THE CONSTRUCTION BASE		ON BASE			
	CONCRETE				
	CEMENT				
	BRICK				
		REINFORCED	CONCRETE		

	WOOD	
	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	X
	FILLER	X problems connected to the fact that the wall was not prepared nor fixed before
		painting (see interviews and figures e.g. losses covered by spray paint)
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X general fading and strong chromatic alteration of an orange on Mandela's face (see
		2014 and now)
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	X (bus, tram and cars)
	SOIL DAMP	
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	X (distruction and recontruction of the building in front on the wall)
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	

	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	?? but no salts
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	X
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	EXPOSITION ON LIGHT	X direct sunlight
	HIGH TEMPERATURE INFLUENCE	X
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	X
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	<u>film)</u>
	ANIMAL ACTIVITIES	
	MICROORGANISMS	

	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	X
	ABRASIONS	X
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS	X
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	





FIG 1: UBUNTU (2014) BY NAIS, PAO, IVAN AND ORTICANOODLES BELOW: THE MURAL PAINTING NOW (APRILE 2019). GENERAL FADING AND STRONG CHROMATIC ALTERATION OF AN ORANGE USED FOR MANDELA'S FACE (TURNED INTO GRAYSH PURPLE)



FIG. 2: CRACKING WITH LOSSES (PLASTER AND PAINTING LAYER) DERIVING FROM PREVIOUS PROBLEMS OF THE WALL



FIG. 3: LOSSES CRACKING AND DELAMINATION ON PAO'S PART. THE WALL SUFFERED OF DECOHESION BEFORE THE PAINTING HAD BEEN REALIZED (SEE COLOR INTO LACUNAS)



FIG. 4: PARTICULAR OF THE CHROMATIC ALTERATION FROM RED –ORANGE TO GREYSH PURPLE OF ONE OF THE COLORS USED TO MAKE MANDELA'S FACE BY ORTICANOODLE

INCLUSION

INFILL

SURFACE - LOSS OF COHESION COLLAPSE DISINTEGRATION POWDERING CRUSHING CRUMBLING TEARING CUTTING INCISION FRACTURING CRACKING SPLITTING **OPEN JOINT DELAMINATION ??? FLAKING** SCALING **SURFACE – OPTICAL ALTERNATION** CHROMATIC **ALTERNATION** DARKENING FADING YELLOWING **BLOOMISH STAINING**

*

* mark

SPOTTING

SURFACE – LOSS OF MATERIAL LOSS LACUNA EROSION ABRASION WEAR CHAFE ROUNDED PERFORATION PITTING GALLERY CAVITY SCRATCH SURFACE – CHEMICAL AND

BIOLOGICAL ALTERNATION BURNING CORROSION CRUST EFFLORESECENECE EMBRITTLED **EXUDATION** PATINA BIOLOGICAL COLONISATION Π BIOFILM

ROUGH SURFACE – ADDITION OF **SUBSTANCES** DEPOSIT DUST ACCRETION CONCRETION FILM SOILING GRAFFITI

DEFORMATION	
SHRINKAGE	
SWELLING	
DEPRESSION	
BLISTERING	
BUCKLING	
WARPING	
TORSION	
BEND	
ROUGHENED	

CAPuS PROJECT – CONDITION REPORT (WALL PAINTING)

1. GENERAL DATA					
NUMBER OF PARTNER: CESMAR7 (P3) AN.T.A.RES (P4)		N.T.A.RES (P4)			
TYPE OF WORK:	Mural painting				
COUNTRY:	Italy				
CITY:	Milano				
ADDRESS:	Via G.C. Procacci	ni 4			
OWNER / CUSTODIAN:	Comune di Milar	10			
LEGAL PROTECTION:	?				
ARTIST:	Ivan, Nais, Pao, C	Ivan, Nais, Pao, Orticanoodles			
TITLE OF THE WORK:	Omaggio a Kahled al Asaad (ID: Object 13b)				
YEAR OF EXECUTION:	2016				
MATERIALS:	Spray paint and house paint on wall				
DIMENSIONS (cm):	Hight: 1000	Width:1000	Depth:		
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)				
PRIMARY CAUSES (RE	LATED TO THE	TECHNIQUE,	TECHNOLOGY AND LOCATION OF THE OBJECT)		
FACTORS RELATED TO	THE CONSTRUCT	ON BASE			
CONCRETE					
CEMENT	CEMENT				
BRICK	BRICK				
REINFORCED	CONCRETE				
WOOD					

	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X slight fading
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	

THE	THERMAL-HUMIDITY FACTORS			
	CAPILLARY MOISTURE			
	MOISTURE CONDENSATION			
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS			
	AND/OR BUILDING INTALATIONS			
	SORPTION MOISTURE			
	BUILDING CONSTRUCIONAL MOISTURE			
THE	RMAL FACTORS			
	TEMPERATURE FLUCTUATIONS	X		
	(DAILY, SEASONAL, ANNUAL)			
	GEOGRAPHIC LOCATION OF THE OBJECT			
	(N, S, E, W)			
	EXPOSITION ON LIGHT	X		
	HIGH TEMPERATURE INFLUENCE	X		
PHYSICO-CHEMICAL FACTORS				
	AIR POLLUTION	X		
	SALT IN THE AIR			
	SALT DISSOLUTION AND CRYSTALIZATION			
	CORROSION			
BIO	BIOLOGICAL FACTORS (biological colonisation, biofilm)			
	ANIMAL ACTIVITIES			
	MICROORGANISMS			
	FUNGUS			
	MOLDS			
	ALGAE			

	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
ME	CHANICAL FACTORS	
	· · · · · · · · · · · · · · · · ·	
	MECHANICAL INJURIES	
	ABRASIONS	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	
	HUMANS	
	INDUSTRIALIZATION	
OTHERS		



APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION



FIG 1: "OMAGE TO KAHLED AL ASAAD" 2016, FABBRICA DEL VAPORE (ABOVE) MILAN AND NOW (2019, BELOW)



FIG.2 : SMALL LOSSES

SURFACE - LOSS OF COHESIONCOLLAPSE	SURFACE – LOSS OF MATERIALLOSS	SURFACE - DEFORMATIONDEFORMATIONSHRINKAGESWELLINGDEPRESSIONBLISTERINGBUCKLINGWARPINGTORSIONBENDROUGHENED
SCALING	SURFACE – CHEMICAL AND BIOLOGICAL ALTERNATION BURNING CORROSION CRUST EFFLORESECENECE EMBRITTLED EXUDATION PATINA BIOLOGICAL COLONISATION BIOFILM	SURFACE – ADDITION OFSUBSTANCESDEPOSITDUSTACCRETIONCONCRETIONFILMSOILINGGRAFFITIINCLUSIONINFILL

CAPuS PROJECT – CONDITION REPORT (WALL PAINTING)

			1. GENERAL DATA	
NUMBER OF PARTNER: CESMAR7 (P3) AN.T.A.RES (P4)				
TYPE OF WORK:	Mural painting			
COUNTRY:	Italy			
CITY:	Reggio Emilia			
ADDRESS:	Via Rivoluzione	d'Ottobre 27		
OWNER / CUSTODIAN:	Municipality of F	Reggio Emilia/Offic	cina Educativa	
LEGAL PROTECTION:	?			
ARTIST:	Ivan Pontevia (Hang) and Daniele Castagnetti			
TITLE OF THE WORK:	UBUNTU (ID: Ob	ject 16)		
YEAR OF EXECUTION: 2018				
MATERIALS:	Spray paint on c	ement (prepared v	with acrylic paint)	
DIMENSIONS (cm):	Hight: 200	Width: 3200	Depth:	
	2. DESCRIPTION OF THE PROBLEM (DEGRADATION)			
PRIMARY CAUSES (RE	PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)			
FACTORS RELATED TO	D THE CONSTRUCT	ION BASE		
CONCRETE				
CEMENT				
BRICK				
REINFORCE	D CONCRETE			
WOOD				

	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
	MATERIALS)	
	BINDER	X
	PIGMENT	X strong alteration of fluorescent colors in 6 months
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	

THE	THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE		
	MOISTURE CONDENSATION		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	X	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W) SEASONAL EROST PENETRATION		
		X	
		X	
лцν			
<u>PH1</u>	SICO-CHEIMICAL FACTORS		
	AIR POLLUTION	X	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION		
BIO	BIOLOGICAL FACTORS (biological colonisation, biofilm)		
	ANIMAL ACTIVITIES		
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		

	MOSS (lichens)				
	PLANTS (SHRUBS, TREES)				
ME	MECHANICAL FACTORS				
	· · · · · · · · · · · · · · · · ·				
	MECHANICAL INJURIES				
	ABRASIONS				
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	X			
	HUMANS				
	INDUSTRIALIZATION				
<u>OTHERS</u>					



FIG 1: UBUTU BY IVAN PONTEVIA AND DANIELE CATSAGNETTI IN JULY 2018 (LEFT) AND IN FEBRUARY 2019 (RIGHT)

	SUPEACE - LOSS OF			
		H		H
				H
		H		H
		H	DEPRESSION	H
		H	BLISTERING	H
			BUCKLING	H
	ROUNDED	H	WARPING	H
	PERFORATION	H	TORSION	H
	PITTING	H	BEND	H
	GALLERY	H	ROUGHENED	
	CAVITY			
	SCRATCH			
SCALING				
SURFACE – OPTICAL ALTERNATION	<u>SURFACE – CHEMIC</u>	CAL AND	<u>SURFACE – ADD</u>	ITION OF
	BIOLOGICAL ALTER	NATION	SUBSTANCES	
ALTERNATION	BURNING		DEPOSIT	
DARKENING	CORROSION		DUST	
FADING	CRUST		ACCRETION	
YELLOWING	EFFLORESECENECE		CONCRETION	
BLOOMISH	EMBRITTLED		FILM	
STAINING	EXUDATION		SOILING	
SPOTTING	PATINA		GRAFFITI	
	BIOLOGICAL		INCLUSION	Ē
	COLONISATION		INFILL	Π
	BIOFILM			—

* mark 😫
APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

VIGO

UVIGO TEAM

1. GENERAL DATA				
NUMBER OF PARTNER:	P15	P15		
TYPE OF WORK:	MURAL PAINTING	MURAL PAINTING		
COUNTRY:	SPAIN			
CITY:	ORDES			
ADDRESS:	RUA FONTE DO REGO DA FRAGA S/N			
OWNER / CUSTODIAN:	ORDES MUNICIPALITY			
LEGAL PROTECTION:	INEXISTENT			
ARTIST:	SOKRAM			
TITLE OF THE WORK:	PECADO ORIGINAL			
YEAR OF EXECUTION:	2012			
MATERIALS:	Acrylic paint on brick wall plastered with cement based mortar, wood and metal			
DIMENSIONS (cm):	Hight: 600	Hight: 600 Width:1000 Depth:-		

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	The coated mortar, made with portland cement, suffers flakening in many areas.
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	Wood (of the doors) is in good conditions.
METAL	Metal of the balconies is corroded and because of this, the paint covering is lost in some places
OTHER	
MATERIALS USED FOR COATING, PLASTER	
BINDER	
FILLER	
MATERIALS USED TO MAKE POLICHROMY (PAINTING	
MATERIALS)	
BINDER	
PIGMENT	
MATERIAL USED TO PROTECT THE SURFACE	
LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
SETTING OF FOUNDATIONS	
UNSTABLE SUPPORT	
FOUNDATIONS AND NONE FOUNDATIONS	
TYPE OF GROUND	
TECTONIC MOVES	
 VIBRATIONS, SHAKES	

	SOIL DAMP	YES. The artwork is on a house near a river
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	
THE	RMAL-HUMIDITY FACTORS	
		VEC
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	YES (KAIN INFILI RATIONS)
	BUILDING CONSTRUCIONAL MOISTURE	
THE	ERMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	EXPOSITION ON LIGHT	
	HIGH TEMPERATURE INFLUENCE	
<u>PH</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	

	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	YES
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
	ANIMAL ACTIVITIES	
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Lichens growing on the paint layer
	PLANTS (SHRUBS, TREES)	Vascular plants growing on places of the facade where earth and dust are
		accumulated.
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	YES, by antrophic action
	ABRASIONS	YES, of anthropic origin
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	





BIOLOGICAL ALTERATION	Biological colinization
OPTICAL ALTERATION	Fading
LOSS OF MATERIAL-paint	Peeling
	Loss
	Craquelure
LOSS OF COHESION-paint and substrate	Flaking
	Fissuring
ADDITION OF SUBSTANCES	Vandalic graffiti

UVIGO TEAM

1. GENERAL DATA			
NUMBER OF PARTNER:	P15		
TYPE OF WORK:	MURAL PAINTING		
COUNTRY:	SPAIN		
CITY:	PONTEVEDRA		
ADDRESS:	RUA PEDREIRA		
OWNER / CUSTODIAN:	UNKNOWN		
LEGAL PROTECTION:	INEXISTENT		
ARTIST:	DELIO		
TITLE OF THE WORK:	O LOBO		
YEAR OF EXECUTION:	209		
MATERIALS:	Acrylic on a wall made on concrete bricks		
DIMENSIONS (cm):	Hight: 200	Width:600	Depth: 50

F	ACTORS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
Γ	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
Γ	MATERIALS USED TO MAKE POLICHROMY (PAINTING	
N	MATERIALS)	
	BINDER	
	PIGMENT	
Ν	MATERIAL USED TO PROTECT THE SURFACE	
L	OCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	

LAT	LATER INTERFERENCES		
	REPARATIONS		
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		
THE	RMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	YES	
	MOISTURE CONDENSATION		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	YES (RAIN INFILTRATIONS)	
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION		
	EXPOSITION ON LIGHT	NO	
	HIGH TEMPERATURE INFLUENCE	NO	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION		
	SALT IN THE AIR		

	SALT DISSOLUTION AND CRYSTALIZATION	YES		
	CORROSION			
BIO	BIOLOGICAL FACTORS (biological colonisation, biofilm)			
	ANIMAL ACTIVITIES			
	MICROORGANISMS	Probably		
	FUNGUS	Probably. A lot of microscopic fungi growth along the wall.		
	MOLDS			
	ALGAE	Probably. Algae biofilm along the wall.		
	MOSS (lichens)	Lichen on punctual sites on the wall.		
	PLANTS (SHRUBS, TREES)			
MEC	MECHANICAL FACTORS			
	MECHANICAL INJURIES			
	ABRASIONS	Yes, of antrophic origin		
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF HUMANS			
	INDUSTRIALIZATION			
OTHERS				
This	This wall is oriented towards the north, therefore, it hardly receives direct sunlight. The artwork was painted on a wall without a previous cleaning.			

Therefore, old paints (red, green and violet remains) begin to appear in the areas where peeling occurs



Biological colinization	
Fading	
Peeling	
Loss	
Craquelure	
Flaking	
Fissuring	
Vandalic graffiti	
	Biological colinization Fading Peeling Loss Craquelure Flaking Fissuring Vandalic graffiti



UVIGO TEAM

1. GENERAL DATA			
NUMBER OF PARTNER:	P15		
TYPE OF WORK:	MURAL PAINTING	Ĵ	
COUNTRY:	SPAIN		
CITY:	ORDES		
ADDRESS:	RUA VALADO (CAMPO DE FUTBOL)		
OWNER / CUSTODIAN:	ORDES MUNICIPALITY		
LEGAL PROTECTION:	INEXISTENT		
ARTIST:	NoveNoel		
TITLE OF THE WORK:	ESCARABAJO PELOTERO		
YEAR OF EXECUTION:	2012		
MATERIALS:	Acrylic paint on reinforced concrete wall		
DIMENSIONS (cm):	Hight: 300 Width:700 Depth:70		

FACT	ORS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	The reinforced concrete suffered punctual superficial detachments associated with
		inclusions or corrosion of the reinforcement.
	WOOD	
	METAL	
	OTHER	
MAT	ERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
MAT	ERIALS USED TO MAKE POLICHROMY (PAINTING	
ΜΑΤΙ	ERIALS)	
	BINDER	
	PIGMENT	
MAT	ERIAL USED TO PROTECT THE SURFACE	
LOCA	TION OF AN OBJECT IN A PLACE NEGATIVELLY	
AFFE	CTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	

	SOIL DAMP		
LATE	LATER INTERFERENCES		
	REPARATIONS		
-	RENOVATION OF A BUILDING		
-	SETTING UP A NEW INSTALLATIONS		
-	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		
THE	RMAL-HUMIDITY FACTORS		
		VES	
-			
-			
-			
-			
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS		
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION		
	EXPOSITION ON LIGHT	YES	
	HIGH TEMPERATURE INFLUENCE	YES	
PHY	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION		

	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION		
BIO	LOGICAL FACTORS (biological colonisation, bio	film)	
	ANIMAL ACTIVITIES		
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)		
	PLANTS (SHRUBS, TREES)	Vascular plants growing on the upper part of the wall and in the joints between	
		concrete plates.	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	YES, of anthropic origin	
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF		
<u>OTH</u>	IERS		





BIOLOGICAL ALTERATION	Biological colinization	
OPTICAL ALTERATION	Fading	
LOSS OF MATERIAL-paint	Peeling	
	Loss	
	Craquelure	
LOSS OF COHESION-paint and substrate	Flaking	
	Fissuring	
ADDITION OF SUBSTANCES	Vandalic graffiti	

UVIGO TEAM

1. GENERAL DATA			
NUMBER OF PARTNER:	IUMBER OF PARTNER: P15		
TYPE OF WORK:	FYPE OF WORK: MURAL PAINTING		
COUNTRY:	OUNTRY: SPAIN		
CITY:	ORDES		
ADDRESS:	RUA VALADO (CAMPO DE FUTBOL)		
OWNER / CUSTODIAN:	ORDES MUNICIPALITY		
LEGAL PROTECTION:	INEXISTENT		
ARTIST:	SPOK		
TITLE OF THE WORK:	MINERO GALLEGO DE PADRE ASTURIANO		
YEAR OF EXECUTION:	2015		
MATERIALS: Acrylic paint on reinforced concrete wall		e wall	
DIMENSIONS (cm): Hight:300 Width:900 Depth:70			

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	
CEMENT	
BRICK	
REINFORCED CONCRETE	The reinforced concrete suffers punctual superficial detachments associated with
	inclusions or corrosion of the reinforcement.
WOOD	
METAL	
OTHER	
MATERIALS USED FOR COATING, PLASTER	
BINDER	
FILLER	
MATERIALS USED TO MAKE POLICHROMY (PAINTING	
MATERIALS)	
BINDER	
PIGMENT	
MATERIAL USED TO PROTECT THE SURFACE	
LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
AFFECTING ITS LASTING	
SETTING OF FOUNDATIONS	
UNSTABLE SUPPORT	
FOUNDATIONS AND NONE FOUNDATIONS	
TYPE OF GROUND	
TECTONIC MOVES	
 VIBRATIONS, SHAKES	

	SOIL DAMP		
LATE	LATER INTERFERENCES		
	REPARATIONS		
-	RENOVATION OF A BUILDING		
-	SETTING UP A NEW INSTALLATIONS		
-	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		
THE	RMAL-HUMIDITY FACTORS		
		VES	
-			
-			
-			
-			
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS		
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION		
	EXPOSITION ON LIGHT	YES	
	HIGH TEMPERATURE INFLUENCE	YES	
PHY	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION		

	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	YES
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, bio	film)
	ANIMAL ACTIVITIES	
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	Vascular plants growing on the upper part of the wall and into the joints between
		concrete plates.
MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	Yes, of anthropic origin
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	
	HUMANS	
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	





BIOLOGICAL ALTERATION	Biological colinization	
OPTICAL ALTERATION	Fading	
LOSS OF MATERIAL-paint	Peeling	
	Loss	
	Craquelure	
LOSS OF COHESION-paint and substrate	Flaking	
	Fissuring	
ADDITION OF SUBSTANCES	Vandalic graffiti	

UVIGO TEAM

1. GENERAL DATA				
NUMBER OF PARTNER:	P15			
TYPE OF WORK:	PE OF WORK: MURAL PAINTING			
COUNTRY:	SPAIN			
CITY:	VIGO	VIGO		
ADDRESS:	RUA DOUTOR CARLOS COLMEIRO LAFORET			
OWNER / CUSTODIAN:	UNKNOWN			
LEGAL PROTECTION:	INEXISTENT			
ARTIST:	LIQEN			
TITLE OF THE WORK:	ENTARAÑA			
YEAR OF EXECUTION:	2008			
MATERIALS:	Acrylic and spray paints on reinforced concrete and brick wall plastered with cement mortar			
DIMENSIONS (cm):	Hight: 300	Width:900	Depth:70	

FACT	ORS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	The materials used for concrete manufacturing are of poor quality. So, concrete has a
		weak resistance.
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MAT	ERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
MAT	ERIALS USED TO MAKE POLICHROMY (PAINTING	
MAT	ERIALS)	
	BINDER	
	PIGMENT	
MAT	ERIAL USED TO PROTECT THE SURFACE	
LOCA	ATION OF AN OBJECT IN A PLACE NEGATIVELLY	
AFFE	CTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	

SOIL DAMP		
LATER INTERFERENCES		
REPARATIONS		
RENOVATION OF A BUILDING		
SETTING UP A NEW INSTALLATIONS		
REPAINTING		
LATER CONSERVATIONS-RESTAURATIONS		
VANDALISM		
THERMAL-HUMIDITY FACTORS		
	YES	
MOISTURE CONDENSATION		
WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	YES (RAIN INFILTRATIONS)	
AND/OR BUILDING INTALATIONS		
SORPTION MOISTURE		
BUILDING CONSTRUCIONAL MOISTURE		
THERMAL FACTORS		
TEMPERATURE FLUCTUATIONS		
(DAILY, SEASONAL, ANNUAL)		
GEOGRAPHIC LOCATION OF THE OBJECT		
(N, S, E, W)		
SEASONAL FROST PENETRATION		
EXPOSITION ON LIGHT		
HIGH TEMPERATURE INFLUENCE		
PHYSICO-CHEMICAL FACTORS		
AIR POLLUTION		

	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	LOGICAL FACTORS (biological colonisation, biof	film)
	ANIMALACTIVITIES	
	MICROORGANISMS	
	FUNGUS	Evidences of MICROSCOPIC FUNGI colonization, both over and under the paint layer.
		Analytical confirmation needed.
	MOLDS	
	ALGAE	
	MOSS (lichens)	LICHENIC colonization, both over and under the paint layer.
		MOSS growth under the paintng layers
	PLANTS (SHRUBS, TREES)	Vascular plants growing near the floor on concrete hollows
MECHANICAL FACTORS		
	MECHANICAL INJURIES	YES
	ABRASIONS	YES, of anthropic origin
	PUBLIC ACCESS, ATTENDANCE OF THE LARGE GROUPS OF	YES
	HUMANS	
	INDUSTRIALIZATION	
OTHERS		
It seems that the wall was not clean before painting. Therefore, paint layer was applied on a concrete support previously colonized by microscopic fungi		
and lichens. This fact decreases the durability of the paint layer and its conservation		
מות ווכוובווז. דווז זמנו תבנו במשבש נווב תתומטווונץ טו נוופ שמווג ומצפו מות ונש נטוושפו עמנוטוו.		





BIOLOGICAL ALTERATION	Biological colinization	
OPTICAL ALTERATION	Fading	
LOSS OF MATERIAL-paint	Peeling	
	Loss	
	Craquelure	
LOSS OF COHESION-paint and substrate	Flaking	
	Fissuring	i i i
ADDITION OF SUBSTANCES	Vandalic graffiti	

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

ACADEMY OF FINE ARTS IN WARSAW

NUMBER OF PARTNER:	P7	
TYPE OF WORK:	mural	
COUNTRY:	POLAND	
CITY:	Warsaw	
ADDRESS:	Stalowa 37 Street	
OWNER / CUSTODIAN:	ZGN Praga Północ (Skarb Państwa - eng. the State Treasury)	
ARTIST:	Linas Domarackas with Warsaw's Prague children and Remus Theater Association	
TITLE OF THE WORK:	Szczudlarze (eng. Stilt Walkers)	
YEAR OF EXECUTION:	2008	
MATERIALS:	acrylic painting on plaster on a brick wall	

DESCRIPTION OF THE PROBLEM

INITIAL REASONS (RELATED TO THE TECHNOLOGY OF IMPLEMENTING AND FITTING THE OBJECT)

FACTOR	S RELATED TO THE CONSTRUCTION SUBSTRATE	
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED TO PERFORM A THREAD, PLASTER	
	BINDER	
	FILLER	
MATERI	AL USED TO MAKE POLICHROMY	
	BINDER	Incorrect application of paints caused peeling and peeling of the paint layer. This is the
		main reason for the destruction of the mural.

	PIGMENT	
MATER	NAL USED TO PROTECT THE SURFACE	
SETTIN	G AN OBJECT IN AN UNCOMPOSITABLE FOR ITS	
DURAB		
	SETTING OF FOUNDATIONS	
	UNSTABLE SUBSTRATE	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF LAND	
	TEXTILE MOVES	
	VIBRATIONS, SHOCK	
	SOIL CONVERSION	

LATER INTERFERENCES

REPARATIONS	Cement patches overlap with the original painting layer
REBUILDING OF BUILDING	
INSTALLATION OF NEW INSTALLATIONS	Installation of a new air-conditioner, replacement of gutters caused mechanical damage to the facility
REPAINTING	Painting the left part of the mural in the gutter area with white paint
LATER CONSERVATIONS-RESTAURANTS	
VANDALISM	Numerous graffiti and vleps

THERMAL-HUMIDITY FACTORS

WILGOĆ KAPILARNA	The original inadequate drainage system caused capillary moisture in the leftmost part of the painting
KONDENSACJA WILGOCI (KONDENSACYJNA)	
INFILTRACJA WODY POCHODZĄCA Z ODPADÓW I/LUB	The original inadequate drainage system caused the destruction of the leftmost part of
INSTALACJI	the painting
WILGOĆ SORBCYJNA	

	WILGOĆ BUDOWLANA	
THE	RMAL FACTORS	•
	TEMPERATURE VIBRATIONS (DAILY, SEASONAL, ANNUAL)	Large temperature fluctuations (diurnal, seasonal and yearly) caused stratification of the painting layer.
	GEOGRAPHIC POSITION OF THE OBJECT (PN, PD, WSCH, ZACH)	The location of the object - north-east, causes a strong insolation of the painting layer in the mornings
	PERIODIC EVALUATION	The autumn and winter season
	SUN ACTION	The location of the object - north-east, causes a strong insolation of the painting layer in the mornings
	HIGH TEMPERATURE OPERATION	In the morning, especially in the spring and summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	The location of the object at the communication route, on the ground floor by the sandy road, causes deposition, in its lower part, of impurities in the form of dust, fumes and salt in the winter season. This is one of the main causes of the destruction of the object.
	CONTENT OF SALT IN THE AIR	
	CRYSTALIZATION OF SALT	
	CORROSION	
BIO	LOGICAL FACTORS	
	ANIMAL ACTIVITIES	Activities of birds (excreta)
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	МСНҮ	
	PLANTS (SHOES, TREES)	

MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	
	ATTENDANCE LARGE GROUP OF HUMAN	
	INDUSTRIALIZATION	
NUMBER OF PARTNER:	P7	
--	--	
TYPE OF WORK:	mural	
COUNTRY:	POLAND	
CITY:	Warsaw	
ADDRESS:	Grzybowska 79 Street	
OWNER / CUSTODIAN:	The Warsaw Rising Museum	
ARTIST:	26 murals by Agata Bogacka, Wiesław Rosocha, Henryk Chmielewski (Papcio Chmiel), Stasys Eidrigevicius, Piotr	
	Młodożeniec, Bartek Materka, Tatjana Utz, Andrzej Pągowski, Edward Dwurnik, Rafał Roskowiński, Twożywo, Galeria Rusz, Wojciech Januszewski, Przemek 'Trust' Truścińśki, Piotr Janowczyk, Jakub Rabelka, Michał Frydrych, Mikołaj Chylak, Dominik Jałowiński, SGMA, Wilhelm Sasnal, Pola Dwurnik	
TITLE OF THE WORK:	Młodożeniec, Bartek Materka, Tatjana Utz, Andrzej Pągowski, Edward Dwurnik, Rafał Roskowiński, Twożywo, Galeria Rusz, Wojciech Januszewski, Przemek 'Trust' Truścińśki, Piotr Janowczyk, Jakub Rabelka, Michał Frydrych, Mikołaj Chylak, Dominik Jałowiński, SGMA, Wilhelm Sasnal, Pola Dwurnik The Wall Art in Rose Garden	
TITLE OF THE WORK: YEAR OF EXECUTION:	Młodożeniec, Bartek Materka, Tatjana Utz, Andrzej Pągowski, Edward Dwurnik, Rafał Roskowiński, Twożywo, Galeria Rusz, Wojciech Januszewski, Przemek 'Trust' Truściński, Piotr Janowczyk, Jakub Rabelka, Michał Frydrych, Mikołaj Chylak, Dominik Jałowiński, SGMA, Wilhelm Sasnal, Pola Dwurnik The Wall Art in Rose Garden 2012	

		DESCRIPTION OF THE PROBLEM
<u>PRI</u>	PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)	
	FACTORS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	
	BRICK	Brick wall cracking
	REINFORCED CONCRETE	
	WOOD	

	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	(cement) Cracking plaster. Intonaco local, local. Numerous intonaco cavities, minor
		mechanical damage. White layer: local, sometimes intense, peeling layer
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	Peeling, chafing, washing, color changes (fading, loss of color intensity)
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	The paintings are made on the wall, on the other side of the wall there is vegetation
		and a wooden, in the form of a gazebo, pub "For Summer", which in the rainy period
		extends the drying of the ground, the same wall
		Objects and vegetation at the back of the wall delay the evaporation of water from the
		ground after the rainy period, which in turn causes capillary moisture, wall scaling and
		mold growth.
LAT	ER INTERFERENCES	
	REPARATIONS	

	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	One of the series of murals has been conserved
	VANDALISM	
<u>THE</u>	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, from foundations and senson precipitation
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	All - geographical location
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
		Yes
		Yes
	HIGH TEMPERATURE INFLUENCE	Yes
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	Yes, it's near the road
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	

BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Yes, birds	
	MICROORGANISMS	Yes	
	FUNGUS		
	MOLDS	Yes	
	ALGAE		
	MOSS (lichens)		
	PLANTS (SHRUBS, TREES)	Yes, on the other side of the wall and roses growing close to murals	
MECHANICAL FACTORS			
	MECHANICAL INJURIES	Yes	
	ABRASIONS	Yes, minor abrasions	
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS		
	INDUSTRIALIZATION		
OTHERS			

CICS, SCHMINCKE

NUMBER OF PARTNER:	
TYPE OF WORK:	bronze sculpture
COUNTRY:	Germany
CITY:	Cologne
ADDRESS:	Hiroshima-Nagasaki-Park, 50923 Cologne
OWNER / CUSTODIAN:	Museum Ludwig / city of Cologne
ARTIST:	Lajos Barta
TITLE OF THE WORK:	Uralte Form
YEAR OF EXECUTION:	1984
MATERIALS:	bronze, patinated

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	
	FILLER	
MATERI	ALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	

	MATERIAL USED TO PROTECT THE SURFACE	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	incorrect second patination caused a stained surface,
	LATER CONSERVATIONS-RESTAURATIONS	cleaning and partial apllication of parisian oxide to fill scratches in the patination,
		application of wax (tecero wax 30222 and 30410 at a ratio of 1 to 1)
	VANDALISM	unprofessional cleaning whereby parts of the patina have been removed
		numerous graffiti, scratches, adhesive labels
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	The average amount of rainfall is very high in Cologne. Due to this the protective wax
	AND/OR BUILDING INTALATIONS	is washed out.
	SORPTION MOISTURE	

	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	
	SEASONAL FROST PENETRATION	winter season
	SUNLIGHT INFLUENCE	in summer, midday and afternoon
	HIGH TEMPERATURE INFLUENCE	in summer, midday and afternoon
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	The location of the object at a sandy footpath causes deposition of dust in summer,
		also due to the location in the city with highly frequented streets around the
		airpollution is large and deposits fuse with the wax
	SALT IN THE AIR	salty deposits in the winter season, because of the use of road salt
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIO	LOGICAL FACTORS	
	ANIMAL ACTIVITIES	dog's urine in the lower part of the object, birds droppings
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	The sculpture is located on a meadow.
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	scratches due to sharp objects and marks from opening bottles with crown caps

	ABRASIONS	due to interaction through humans (climbing on the sculpture,)
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Its located in the middle of a highly frequented park, with parties and festivals during
		the year
	INDUSTRIALIZATION	
<u>OT</u> F	IERS	

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

Gradski muzej Sisak/Sisak Municipal Museum

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Park between Marijana Cvetkovića street and Braće Kavurić street
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Josip Diminić
TITLE OF THE WORK:	Objekt II / Object II
YEAR OF EXECUTION:	1979.
MATERIALS:	Painted steel

FACTORS	RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention- increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERIA	LS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATER	IALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATER	IAL USED TO PROTECT THE SURFACE	Sculpture was conserved-restored in 2014. Paint system used is
			EPOXY+PUR (Helipox 10-10 + Heliopur 31-0050 by Chromos boje i lakovi,
			Croatia). For smoothing out the surface a polyester two component putty was
			used (Presto Fullspachtel).
	AFFECT	ING ITS LASTING	
		SETTING OF FOUNDATIONS	Marsh,wet land
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	extremely
<u>LAT</u>	ER INTE	ERFERENCES	
	REPARA	ATIONS	
	RENOV	ATION OF A BUILDING	
	SETTING	G UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	CONSERVATIONS-RESTAURATIONS	Sculpture was conserved-restored in 2014. Paint system used is EPOXY+PUR (Helipox
			10-10 + Heliopur 31-0050 by Chromos boje i lakovi, Croatia). For smoothing out the
			surface a polyester two component putty was used (Presto Fullspachtel). After a while,
			a white semitransparent layer was observed on the places where the putty was

		applied. Part of original metal sheet on the "floor" had to be replaced because it was
		very corroded, smaller holes made by corrosion were filled with epoxy resin and glass
		fibre.
	VANDALISM	People entering the sculpture damage the paint layer by shoes, people letting dogs
		enter the sculpture
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	Possible inside the culpture
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field
	(N, S, E, W)	nessible
		Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts

BIO	SIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	yes	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEG	CHANICAL FACTORS		
	MECHANICAL INJURIES	Yes, probably due to grass mowing arround the sculpture	
	ABRASIONS	Yes, on the "floor" from people walking	
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS		
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
<u>OT</u>	<u>IERS</u>		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Intersection of Andrije Hebranga street anad Capraška street
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Ratko Petrić
TITLE OF THE WORK:	Užarena planeta / Incandescent Planet
YEAR OF EXECUTION:	1975.
MATERIALS:	Steel, plastics, glass fibre reinforced plastics, rubber (copper?)

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	Moisture retention- increases corrosion rates
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Parts of the sculpture were broken off. Inscriptions in the paint, abrasions, graffiti
<u>THE</u>	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	yes
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	yes
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	MECHANICAL FACTORS		
	MECHANICAL INJURIES	Yes, signs of breaks of the polymer parts	
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, bus stop and residential buildings close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Kneza Branimira 40
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Mila Kumbatović
TITLE OF THE WORK:	Fontana / Fountain
YEAR OF EXECUTION:	1975.
MATERIALS:	Steel, copper alloy, paint

	FACTORS RELATED TO THE CONSTRUCTION BASE		
	CON	ICRETE	Moisture retention-increases corrosion rates
	CEM	1ENT	
	BRIC	СК	
	REIN	IFORCED CONCRETE	
	WOO	OD	
	MET	ſAL	
	OTH	IER	
	MATERIALS USED FOR COATING, PLASTER		
	BIND	DER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints (zinc plating?), degraded, damaged – in traces
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAINT	ING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Inscriptions in the paint, abrasions
<u>THE</u>	THERMAL-HUMIDITY FACTORS		
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	NFILTRATION FROM RAINFALLS, SNOW FALLS	yes
	AND/OR	BUILDING INTALATIONS	

	SORPTION MOISTURE			
	BUILDING CONSTRUCIONAL MOISTURE			
<u>THE</u>	THERMAL FACTORS			
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer		
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)			
	SEASONAL FROST PENETRATION	possible		
	SUNLIGHT INFLUENCE	Complete exposure		
	HIGH TEMPERATURE INFLUENCE	Yes, during summer		
<u>PHY</u>	SICO-CHEMICAL FACTORS			
	AIR POLLUTION	High - road, oil refinery close by		
	SALT IN THE AIR			
	SALT DISSOLUTION AND CRYSTALIZATION			
	CORROSION	Yes, active on parts. Given that steel and copper alloy elements are connected, the		
		development of galvanic corrosion is possible		
<u>BIO</u>	BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible		
	MICROORGANISMS			
	FUNGUS			
	MOLDS			
	ALGAE			
	MOSS (lichens)	Present – moisture retention – increased corrosion rates		
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates		
ME	MECHANICAL FACTORS			
	MECHANICAL INJURIES			

	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTHERS</u>		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK: sculpture		
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Park between Marijana Cvetkovića street and Braće Kavurić street	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Peruško Bogdanić	
TITLE OF THE WORK:	Bez jahača / Riderless	
YEAR OF EXECUTION:	1983.	
MATERIALS:	Zinc plated painted steel	

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Zic plating; industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	Marsh, very wet ground
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	Possible inside the sculpture because of the holes in the metal
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	Possible because of the holes in the metal
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N. S. E. W)	Open field	
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible (ant nest was remooved from the sculpture)	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	Yes, people interacting with the sculpture	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OT</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK: sculpture		
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Marijana Cvetkovića, by the road going from main entrance of ex Sisak Ironworks towards city center	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl		
ARTIST:	Josip Diminić	
TITLE OF THE WORK:	Objekt I /Object I	
YEAR OF EXECUTION:	1979.	
MATERIALS:	Painted steel	

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – not the best corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	Water infiltration because of the shape – increased corrosion rates
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION	Possible because of the salt used for de-iceing of the road	
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, bus stop and medical facilities close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK: sculpture		
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Hrvatskog narodnog preporoda street, in front of kindergarten	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl		
ARTIST:	Ratko Petrić	
TITLE OF THE WORK:	Čovjek stroj / Man-Machine	
YEAR OF EXECUTION:	1975.	
MATERIALS:	Painted steel	

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	No concrete plinth – sculpture is in direct contact with the ground
		OTHER	
	MATERIALS USED FOR COATING, PLASTER		
		BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Partly zinc plated, Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with ground – prolonged moisture retention
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	"Head" of the sculpture stolen. Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
PHYSICO-CHEMICAL FACTORS			
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES	Breaks where the head was attached	
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, kindergarten close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Hrvatskog narodnog preporoda street, in front of Post office
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Zlatko Zlatić
TITLE OF THE WORK:	Zgurić i obitelj / Zgurić and Family
YEAR OF EXECUTION:	1978.
MATERIALS:	Painted (zinc plated?) steel

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	Moisture retention-increases corrosion rates
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERIALS USED FOR COATING, PLASTER		
		BINDER	

		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERIA	AL USED TO PROTECT THE SURFACE	Industrial paints, partly degraded and damaged
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY		
	AFFECTING ITS LASTING		
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ATER INTERFERENCES		
	REPARATIONS		
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAINTING LATER CONSERVATIONS-RESTAURATIONS		
	VANDAL	ISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		IUMIDITY FACTORS	
	CAPILLARY MOISTURE		Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER I	NFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR	BUILDING INTALATIONS	
	SORPTION MOISTURE		
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	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, shops, restaurants, post office, residential buildings etc. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTI</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Trg hrvatske državnosti
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Belizar Bahorić
TITLE OF THE WORK:	Visoki napon / High Voltage
YEAR OF EXECUTION:	1982.
MATERIALS:	Painted steel (zinc plated?)

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc plating (?), industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		<u>RFERENCES</u>	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Inscriptions in the paint, abrasions, graffiti
<u>THE</u>	THERMAL-HUMIDITY FACTORS		
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT	Open square	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	MECHANICAL FACTORS		
	MECHANICAL INJURIES	Yes, damage on the upper part (possible grenade shrapnel)	
	ABRASIONS	yes	

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools, shops, bank, residential buildings etc. close by	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
<u>OTH</u>	IERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Trg hrvatske državnosti
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Hamo Čavrk
TITLE OF THE WORK:	Forma I / Form I
YEAR OF EXECUTION:	1982.
MATERIALS:	Painted (zinc plated?) steel

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	Moisture retention- increases corrosion rates
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc plated (?); Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		<u>RFERENCES</u>	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		IUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
<u>THE</u>	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	Open square	
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active. Structural integrity of parts endangered.	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools, library, bank, stores, residential buildings etc. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Otokara Keršovanija street, ex Metaling production halls, by the buildings on the left of the main entrance	
OWNER / CUSTODIAN:	DIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	RTIST: Zlatko Zlatić	
TITLE OF THE WORK:	Slučajan oblik s tezom / Random Form With a Thesis	
YEAR OF EXECUTION:	1978.	
MATERIALS:	Zinc plated painted steel	

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete base – sculpture is in the direct contact with the ground
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc plating; industrial paints, degraded, damaged in places – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with the sculpture – prolonged moisture retention
LAT	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	
THE	RMAL-I	IUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	Open field	
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery and other industrial plants close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, industrial plants and factory store close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	In front of present day Rohrwerk Maxhutte production hall	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl		
ARTIST:	Petar Barišić	
TITLE OF THE WORK:	Muškarac i žena / Man and Woman	
YEAR OF EXECUTION:	1979.	
MATERIALS:	Zinc plated steel	

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	Moisture retention-increases corrosion rates
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc plating; (possible traces of paint?)
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAI	ISM	
THE	RMAL-I	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OF	R BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal	
	(DAILY, SEASONAL, ANNUAL)		
		Open field	
	(N, S, E, W) SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery and other industrial plants close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, in front of factory enterance
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Intersection between Marijana Cvetkovića and Braće Kavurića Street, in front of main enterance to ex Sisak Ironworks	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl		
ARTIST:	Ivan Kožarić	
TITLE OF THE WORK:	Antipodi / Antipodes	
YEAR OF EXECUTION:	1972.	
MATERIALS:	Painted steel	

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	Moisture retention-increases corrosion rates
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	Asphalted
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	Vibrations due to traffic – probable cause of plinth breaking in places
		SOIL DAMP	
LAT	LATER INTERFERENCES		
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAI	ISM	Inscriptions in the paint, abrasions, graffiti
THE	THERMAL-HUMIDITY FACTORS		
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
<u>THE</u>	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N. S. E. W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION	Possible influence of the salt used for de-iceing the roads	
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
<u>MEC</u>	CHANICAL FACTORS		
	MECHANICAL INJURIES	Partial breaks of welds	
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, bus stop and medical facilities close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Park between Marijana Cvetkovića street and Braće Kavurić street
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Dušan Subotić
TITLE OF THE WORK:	Reljef u prostoru / Relief in Space
YEAR OF EXECUTION:	1981.
MATERIALS:	Painted steel (zinc plated?)

FACTORS REL	LATED TO THE CONSTRUCTION BASE	
CON	NCRETE	Moisture retention-increases corrosion rates
CEM	MENT	
BRIC	СК	
REIN	NFORCED CONCRETE	
WO	DOD	
MET	TAL	
OTH	HER	
MATERIALS U	USED FOR COATING, PLASTER	
BIN	IDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial pain in traces
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Only the steel base of the sculpture is left, the rest was stolen
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Under the trees – partial exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	Break marks along the welds that were conecting the base with parts of the relief
	ABRASIONS	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Marijana Cvetkovića, by the road going from main entrance of ex Sisak Ironworks towards city center	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Theo Amrein Kujundžić	
TITLE OF THE WORK:	Naš život / Our Life	
YEAR OF EXECUTION:	1977.	
MATERIALS:	Steel (painted?)	

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Possibly industrial paints in traces
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Traces of old graffiti
<u>THE</u>	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	Possible incide the sculpture because of water penetration trough holes in welds
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT	
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	Possible bacause of salt used for de-iceing the road
	CORROSION	Yes, full surface
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Marijana Cvetkovića, by the road going from main entrance of ex Sisak Ironworks towards city center
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Miivoje Babović
TITLE OF THE WORK:	Skulptura V /Sculpture V
YEAR OF EXECUTION:	1981.
MATERIALS:	Painted steel

	FACTOR	S RELATED TO THE CONSTRUCTION BASE	
		CONCRETE	Moisture retention-increases corrosion rates
		CEMENT	
ľ		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Loss of sculpture elements (pipes), graffiti, inscriptions
THE	THERMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	Possible- damages to the paint and metal
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	·
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MECHANICAL FACTORS		
	MECHANICAL INJURIES	Yes, from vandalism
	ABRASIONS	yes

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Marijana Cvetkovića, by the road going from main entrance of ex Sisak Ironworks towards city center
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Sašo Stevović
TITLE OF THE WORK:	Proces rada / The Work Process
YEAR OF EXECUTION:	1975.
MATERIALS:	steel

	FACTOR	S RELATED TO THE CONSTRUCTION BASE	
		CONCRETE	Moisture retention – increases corrosion rates
		CEMENT	
I		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

	FILLER		
	MATERIALS USED TO MAKE POLICHROMY		
	BINDER		
	PIGMENT		
	MATERIAL USED TO PROTECT THE SURFACE	None or coating in traces	
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY		
	AFFECTING ITS LASTING		
	SETTING OF FOUNDATIONS		
	UNSTABLE SUPPORT		
	FOUNDATIONS AND NONE FOUNDATIONS		
	TYPE OF GROUND		
	TECTONIC MOVES		
	VIBRATIONS, SHAKES	Vibrations due to close proximity of the road	
	SOIL DAMP	In direct contact with concrete base – prolonged moisture retention	
LATER INTERFERENCES			
	REPARATIONS		
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM	Graffiti and inscriptions	
THERMAL-HUMIDITY FACTORS			
	CAPILLARY MOISTURE	Yes, trough concrete base – prolonged moisture retention	
	MOISTURE CONDENSATION		
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
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	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Corrosion present on all surfaces, possibly stronger because of ice tawing salts applied	
		to the road in winter	
BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	CHANICAL FACTORS		
	MECHANICAL INJURIES		

	ABRASIONS	Yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, close to a supermarket, close to road (possible car accidents)
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	OTHERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Aleja narodnih heroja, close to Faculty of Metallurgy
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Vera Fischer
TITLE OF THE WORK:	Simetrija / Simmetry
YEAR OF EXECUTION:	1973.
MATERIALS:	Painted steel

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	Complete repainting.
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	abrasions
<u>The</u>	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N. S. E. W)	Open field	
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION		
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools and faculty close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTH	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Intersection of Kneza Branimira street and Hrvatskog narodnog preporoda street, across from the Slovenski square	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl		
ARTIST:	Boško Atanacković	
TITLE OF THE WORK:	Kompozicija I i II / Composition I and II	
YEAR OF EXECUTION:	1982.	
MATERIALS:	Painted steel	

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THERMAL FACTORS			
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OT</u>	<u>HERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Trg hrvatske državnosti
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Ante Rašić
TITLE OF THE WORK:	Govornik / Orator
YEAR OF EXECUTION:	1984.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete plinth – sculpture is in direct contact with ground
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	Sculpture in direct contact with concrete pavement- prolonged moisture retention
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Inscriptions in the paint, abrasions, graffiti
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete pavement - prolonged moisture retention
	MOISTURE CONDENSATION	Possible inside the sculpture

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	yes	
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
<u>THE</u>	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT	Open square	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES		
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)		
	PLANTS (SHRUBS, TREES)		
MEC	MECHANICAL FACTORS		

	MECHANICAL INJURIES	Partial separation of parts due to corrosion
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools, shops, bank, residential buildings etc. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Trg hrvatske državnosti (now in Sisak Municipal Museum's storage)
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Branko Ružić
TITLE OF THE WORK:	Vrata / Doors
YEAR OF EXECUTION:	1984.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	
METAL	Sculpture was previously placed on a square with concrete paving – moisture retention
	- increases corrosion rates
OTHER	
MATERIALS USED FOR COATING, PLASTER	

		BINDER	
		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	DN OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECII		
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	
LAT	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	ATION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	ſING	
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		Inscriptions in the paint, abrasions, graffiti
THE	RMAL-I	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTURE CONDENSATION		

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT	Open square	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active	
BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	MECHANICAL FACTORS		

	MECHANICAL INJURIES	yes
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools, stores, library, bank etc. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Trg hrvatske državnosti
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Dora Kovačević
TITLE OF THE WORK:	Zid / Wall
YEAR OF EXECUTION:	1985.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete plinth – sculpture is in direct contact with the ground
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	Sculpture is in direct contact with paved flooring-prolonged moisture retention
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	
	MOISTURE CONDENSATION	

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
PHYSICO-CHEMICAL FACTORS			
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	MECHANICAL FACTORS		

	MECHANICAL INJURIES	
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, buildings, schools, bank, stores close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Park between Marijana Cvetkovića street and Braće Kavurić street
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Jure Žaja
TITLE OF THE WORK:	U spomen Jurju Dalmatincu / In Memory of George of Dalmatia
YEAR OF EXECUTION:	1979.
MATERIALS:	Zinc plated steel (painted?)

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Possible industrial paints in traces
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Larger part of the sculpture was stolen
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	Possible prolonged water/snow retention in certain areas because of the shape
	AND/OR BUILDING INTALATIONS	
-		

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	Open field
	SEASONAL FROST PENETRATION	
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High – road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	Break of metal/weld when part of sculpture was stolen
	ABRASIONS	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Marijana Cvetkovića, by the road going from main entrance of ex Sisak Ironworks towards city center
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Milena Lah
TITLE OF THE WORK:	Forma / Form
YEAR OF EXECUTION:	1973.
MATERIALS:	Painted (zinc plated?) steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
CON	NCRETE	Moisture retention-increases corrosion rates
CEM	MENT	
BRIC	СК	
REIN	NFORCED CONCRETE	
WO	DOD	
MET	TAL	
OTH	HER	
MATERIALS U	USED FOR COATING, PLASTER	
BIN	IDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Zinc plating; industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
<u>LAT</u>	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	possible
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	Possible because of the shape of the sculpture
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
<u>THE</u>	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS	·	
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION	Possible because of the salt used to de-ice the road	
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	CHANICAL FACTORS		
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS		
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
<u>OT</u>	OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Ulica Marijana Cvetkovića, close to Technical School Sisak
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Milena Lah
TITLE OF THE WORK:	Galebovo krilo /Seagull's Wing
YEAR OF EXECUTION:	1973.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY		
	AFFECTING ITS LASTING		
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	Vibrations due to traffic
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		<u>RFERENCES</u>	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		Possible repainting
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDAL	ISM	Inscriptions in the paint, abrasions, graffiti
THERMAL-HUMIDITY FACTORS		IUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION		
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	yes

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools close by	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
OTH	<u>OTHERS</u>		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	storage
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Branislav Milašinović
TITLE OF THE WORK:	Krajputaš / Wayside Monument
YEAR OF EXECUTION:	1984.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	Sculpture was set on a concrete plinth for many years. Moisture retention-increases
	corrosion rates
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	
METAL	
OTHER	
MATERIALS USED FOR COATING, PLASTER	

		BINDER	
		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	Was in direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		RFERENCES	
	REPARA	TIONS	
	RENOVATION OF A BUILDING		
	SETTING UP A NEW INSTALLATIONS		
	REPAINTING		Possible overpaint
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDALISM		
THERMAL-HUMIDITY FACTORS		IUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
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	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIO	LOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Were present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			

	MECHANICAL INJURIES	
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, was exhibited in a courtyard of a correction facilitie
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY: Croatia	
CITY: Sisak	
ADDRESS: storage	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST: Andre Mohorovičić	
TITLE OF THE WORK: Ornament / Ornament	
YEAR OF EXECUTION:	1984.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	Sculpture was set on a concrete plinth for many years. Moisture retention-increases
	corrosion rates
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	
METAL	
OTHER	
MATERIALS USED FOR COATING, PLASTER	

		BINDER	
		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	Was in direct contact with concrete base- prolonged moisture retention
LAT	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	ATION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	ſING	Possible overpaint
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	
<u>THE</u>	RMAL-I	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
		High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT		
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts. Visible losses due to corrosion	
BIO	LOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Were present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			

	MECHANICAL INJURIES	
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, was exhibited in a courtyard of a correction facilitie
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER: 13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture
COUNTRY: Croatia	
CITY: Sisak	
ADDRESS:	Andrije Hebranga 30
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST: Jure Žaja	
TITLE OF THE WORK:	Glava bika / Bull's Head
YEAR OF EXECUTION:	1979.
MATERIALS:	Zinc plated steel

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Zinc plated
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	ER INTERFERENCES	
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Abrasions from interaction with people
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, residential buildings, bus stop etc. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTH	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Kneza Branimira 33	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Zvonimir Kamenar	
TITLE OF THE WORK:	Leptir / Butterfly	
YEAR OF EXECUTION:	1982.	
MATERIALS:	Painted steel	

	FACTORS RELATED TO THE CONSTRUCTION BASE		
		CONCRETE	Moisture retention-increases corrosion rates
		CEMENT	
		BRICK	
		REINFORCED CONCRETE	
		WOOD	
		METAL	
		OTHER	
	MATERI	ALS USED FOR COATING, PLASTER	
		BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LAT	LATER INTERFERENCES		
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Inscriptions in the paint, abrasions, graffiti
<u>THE</u>	THERMAL-HUMIDITY FACTORS		
	CAPILLA	RY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THERMAL FACTORS			
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MECHANICAL FACTORS			
	MECHANICAL INJURIES		
	ABRASIONS	yes	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Trg hrvatske državnosti	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Ante Kuduz	
TITLE OF THE WORK:	Grad '85. / City '85	
YEAR OF EXECUTION:	1985.	
MATERIALS:	Painted steel	

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete plinth - sculpture is in direct contact with the ground
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	Sculpture is in direct contact with the ground – prolonged moisture retention
<u>LATI</u>	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Part of the sculpture was stolen, remaining parts are not connected. Inscriptions in the
			paint, abrasions, graffiti
THE	RMAL-H	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
-	MOISTU	RE CONDENSATION	

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS		
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
ME	MECHANICAL FACTORS		

	MECHANICAL INJURIES	Breaks on weled joints.
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, schools, stores, library, residential buildings et. close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	Trg hrvatske državnosti 1, inside the Municipal Library	
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Slobodanka Stupar	
TITLE OF THE WORK:	Molitvenik / Prayer Book	
YEAR OF EXECUTION:	1987.	
MATERIALS:	steel	

FACTOR	RS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	IALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Possible chemical treatment of the surface (patination, browning?)
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	Paved floor
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	Minimal vibrations caused by walking
		SOIL DAMP	
<u>LAT</u>	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	ſING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAI	ISM	
THE	RMAL-I	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OF	R BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
<u>THE</u>	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	Relatively minimal fluctuations – library space
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	SUNLIGHT INFLUENCE	Exposure trough windows
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	Minimal – closed space
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIO	LOGICAL FACTORS	
	ANIMAL ACTIVITIES	
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	
MEC	CHANICAL FACTORS	
	MECHANICAL INJURIES	
	ABRASIONS	Yes – probably from library personel mooving the sculpture or working around it

APPENDIX OF GENERAL RAPORT WP3 - CAUSES OF DAMAGE, AGENTS OF DETERIORATION

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes – public library
	INDUSTRIALIZATION	
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Road flanking the Rohrwerk Maxhutte production site
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Dubravka Sambolec
TITLE OF THE WORK:	Ritam II / Rhythm II
YEAR OF EXECUTION:	1978.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete plinth – sculpture is in direct contact with the ground
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with the sculpture – prolonged moisture retention
<u>LAT</u>	ER INTE	RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	ſING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	
THE	RMAL-H	HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OF	R BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
<u>PHY</u>	SICO-CHEMICAL FACTORS	
	AIR POLLUTION	High - road, oil refinery and other industrial plants close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIO	LOGICAL FACTORS	
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MECHANICAL FACTORS		
	MECHANICAL INJURIES	
	ABRASIONS	yes

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, factory entrance close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	By the building on the right of the main enterance of ABS steel
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Erik Lovko
TITLE OF THE WORK:	Stup puzzle / Puzzle Column
YEAR OF EXECUTION:	1978.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	In direct contact with ground – no concrete base
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	Sculpture is in direct contact with the ground – prolonged moisture retention
LATER INTERFERENCES		<u>RFERENCES</u>	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAIN	TING	
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAL	ISM	Inscriptions in the paint, abrasions
<u>THE</u>	THERMAL-HUMIDITY FACTORS		
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	Possible inside of the sculpture
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OF	BUILDING INTALATIONS	

	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	THERMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N. S. E. W)	Open field	
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery and other industrial plants close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
MEC	CHANICAL FACTORS		
	MECHANICAL INJURIES		
	ABRASIONS	Yes, going to the metal	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, by the main entrance of a factory	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
OTH	OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY: Croatia	
CITY: Sisak	
ADDRESS: By the main enterance of ABS steel	
OWNER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST: Unknown	
TITLE OF THE WORK:	Unknown (Skulptura od rezanih cijevi / Cut Tubes Sculpture)
YEAR OF EXECUTION:	1974.
MATERIALS:	Painted steel

FACTORS RELATED TO THE CONSTRUCTION BASE		Moisture retention-increases corrosion rates
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERIALS USED FOR COATING, PLASTER		
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	
	VANDALISM	Pipes broken of, or partialy detached
THERMAL-HUMIDITY FACTORS		
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible
	AND/OR BUILDING INTALATIONS	

	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field
	SEASONAL FROST PENETRATION	possible
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery and other industrial plants close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	Yes, active on parts
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	Present – moisture retention – increased corrosion rates
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MECHANICAL FACTORS		
	MECHANICAL INJURIES	Detached or semi-detached parts (pipes)
	ABRASIONS	

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, by the entrance of a factory
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY: Sisak	
ADDRESS:	Braće Kavurića street, Swisslion factory circle
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Josip Zeman
TITLE OF THE WORK:	Crne vizije II / Dark Visions II
YEAR OF EXECUTION:	1983.
MATERIALS:	Painted zinc plated steel

FACTORS RELATED TO THE CONSTRUCTION BASE		
	CONCRETE	
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	No concrete plinth – bottom part of the sculpture is in direct contact with ground
	OTHER	
MATERIALS USED FOR COATING, PLASTER		
	BINDER	

		FILLER	
	MATERIALS USED TO MAKE POLICHROMY		
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc coated, industrial paints damaged on parts.
	LOCATIC	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	In direct contact with sculpture
LATER INTERFERENCES		RFERENCES	
	REPARA	TIONS	
	RENOVATION OF A BUILDING		
	SETTING	UP A NEW INSTALLATIONS	
	REPAINT	TING	
	LATER CONSERVATIONS-RESTAURATIONS		
	VANDAL	ISM	
THERMAL-HUMIDITY FACTORS			
	CAPILLARY MOISTURE		
	MOISTURE CONDENSATION		
	WATER	INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR	BUILDING INTALATIONS	
	SORPTION MOISTURE		
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	BUILDING CONSTRUCIONAL MOISTURE		
<u>THE</u>	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS (DAILY, SEASONAL, ANNUAL)	High fluctuations causing stress on metal and paint layer	
	GEOGRAPHIC LOCATION OF THE OBJECT (N, S, E, W)	Open field	
	SEASONAL FROST PENETRATION		
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	SICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - oil refinery and other industrial plants close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIOLOGICAL FACTORS			
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
<u>MEC</u>	CHANICAL FACTORS		
	MECHANICAL INJURIES	Yes, paint chipped in places	
	ABRASIONS		

	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OT</u>	<u>IERS</u>	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Ulica Braće Kavurić, close to gym by the pool
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Vera Fischer
TITLE OF THE WORK:	Cvijet
YEAR OF EXECUTION:	1973.
MATERIALS:	Painted steel

DESCRIPTION OF THE PROBLEM

PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)

FACTOR	S RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Moisture retention-increases corrosion rates
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
MATERI	ALS USED FOR COATING, PLASTER	
	BINDER	

	FILLER	
	MATERIALS USED TO MAKE POLICHROMY	
	BINDER	
	PIGMENT	
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints - new
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY AFFECTING ITS LASTING	
	SETTING OF FOUNDATIONS	
	UNSTABLE SUPPORT	
	FOUNDATIONS AND NONE FOUNDATIONS	
	TYPE OF GROUND	
	TECTONIC MOVES	
	VIBRATIONS, SHAKES	Vibrations due to traffic
	SOIL DAMP	In direct contact with concrete base- prolonged moisture retention
LATER INTERFERENCES		
	REPARATIONS	
	RENOVATION OF A BUILDING	
	SETTING UP A NEW INSTALLATIONS	
	REPAINTING	
	LATER CONSERVATIONS-RESTAURATIONS	Conserved-restored.
	VANDALISM	Sculpture was damaged by heavy machinery during the renovation of the pool, it vas
		conserved-restored afterwards.
THE	RMAL-HUMIDITY FACTORS	
	CAPILLARY MOISTURE	Yes, concrete base - prolonged moisture retention
	MOISTURE CONDENSATION	

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	
	AND/OR BUILDING INTALATIONS	
	SORPTION MOISTURE	
	BUILDING CONSTRUCIONAL MOISTURE	
THE	RMAL FACTORS	
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer
	(DAILY, SEASONAL, ANNUAL)	
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field
	(N, S, E, W)	
	SEASONAL FROST PENETRATION	
	SUNLIGHT INFLUENCE	Complete exposure
	HIGH TEMPERATURE INFLUENCE	Yes, during summer
PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by
	SALT IN THE AIR	
	SALT DISSOLUTION AND CRYSTALIZATION	
	CORROSION	
BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible
	MICROORGANISMS	
	FUNGUS	
	MOLDS	
	ALGAE	
	MOSS (lichens)	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates
MECHANICAL FACTORS		

	MECHANICAL INJURIES	
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	Yes, public pool close by
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
<u>OTH</u>	IERS	

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum
TYPE OF WORK:	sculpture
COUNTRY:	Croatia
CITY:	Sisak
ADDRESS:	Park between Marijana Cvetkovića street and Braće Kavurić street
OWNER / CUSTODIAN:	City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl
ARTIST:	Josip Zeman
TITLE OF THE WORK:	Crne vizije I / Dark Visions I
YEAR OF EXECUTION:	1983.
MATERIALS:	Zinc plated steel (paited?)

DESCRIPTION OF THE PROBLEM

PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)

FACTORS RELATED TO THE CONSTRUCTION BASE	
CONCRETE	
CEMENT	
BRICK	
REINFORCED CONCRETE	
WOOD	
METAL	There is no concrete plinth on wich the sculpture would stand, instead base is made
	out of steel, like the whole sculpture, and semi burried in the ground
OTHER	
MATERIALS USED FOR COATING, PLASTER	

		BINDER	
		FILLER	
	MATERI	ALS USED TO MAKE POLICHROMY	
		BINDER	
		PIGMENT	
	MATERI	AL USED TO PROTECT THE SURFACE	Zinc plating, industrial paints in traces
	LOCATIO	ON OF AN OBJECT IN A PLACE NEGATIVELLY	
	AFFECTI	NG ITS LASTING	
		SETTING OF FOUNDATIONS	
		UNSTABLE SUPPORT	
		FOUNDATIONS AND NONE FOUNDATIONS	
		TYPE OF GROUND	Wet, marshy ground
		TECTONIC MOVES	
		VIBRATIONS, SHAKES	
		SOIL DAMP	Very damp soil in direct contact with metal base of the sculpture
LATER INTERFERENCES		RFERENCES	
	REPARA	TIONS	
	RENOVA	TION OF A BUILDING	
	SETTING	UP A NEW INSTALLATIONS	
	REPAINTING		
	LATER C	ONSERVATIONS-RESTAURATIONS	
	VANDAI	ISM	
THERMAL-HUMIDITY FACTORS		HUMIDITY FACTORS	
	CAPILLA	RY MOISTURE	
	MOISTU	RE CONDENSATION	Possible inside the sculpture

	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS	possible	
	AND/OR BUILDING INTALATIONS		
	SORPTION MOISTURE		
	BUILDING CONSTRUCIONAL MOISTURE		
THE	RMAL FACTORS		
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer	
	(DAILY, SEASONAL, ANNUAL)		
	GEOGRAPHIC LOCATION OF THE OBJECT	Open field	
	(N, S, E, W)		
	SEASONAL FROST PENETRATION	possible	
	SUNLIGHT INFLUENCE	Complete exposure	
	HIGH TEMPERATURE INFLUENCE	Yes, during summer	
<u>PHY</u>	PHYSICO-CHEMICAL FACTORS		
	AIR POLLUTION	High - road, oil refinery close by	
	SALT IN THE AIR		
	SALT DISSOLUTION AND CRYSTALIZATION		
	CORROSION	Yes, active on parts	
BIO	BIOLOGICAL FACTORS		
	ANIMAL ACTIVITIES	Possible	
	MICROORGANISMS		
	FUNGUS		
	MOLDS		
	ALGAE		
	MOSS (lichens)	Present – moisture retention – increased corrosion rates	
	PLANTS (SHRUBS, TREES)	In vicinity - moisture retention – increased corrosion rates	
ME	MECHANICAL FACTORS		

	MECHANICAL INJURIES	
	ABRASIONS	yes
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS	
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action
OTHERS		

NUMBER OF PARTNER:	13 Gradski muzej Sisak/Sisak Municipal Museum	
TYPE OF WORK:	sculpture	
COUNTRY:	Croatia	
CITY:	Sisak	
ADDRESS:	DRESS: storage	
OWNER / CUSTODIAN:	NER / CUSTODIAN: City of Sisak / Gradski muzej Sisak /Gradska galerija Striegl	
ARTIST:	Vera Fischer	
TITLE OF THE WORK:	Cvijet / Flower	
YEAR OF EXECUTION:	1980.	
MATERIALS:	Painted steel	

DESCRIPTION OF THE PROBLEM

PRIMARY CAUSES (RELATED TO THE TECHNIQUE, TECHNOLOGY AND LOCATION OF THE OBJECT)

	FACTORS RELATED TO THE CONSTRUCTION BASE	
	CONCRETE	Previously set on a concrete plinth - Moisture retention-increases corrosion rate
	CEMENT	
	BRICK	
	REINFORCED CONCRETE	
	WOOD	
	METAL	
	OTHER	
	MATERIALS USED FOR COATING, PLASTER	

	BINDER			
	FILLER			
	MATERIALS USED TO MAKE POLICHROMY			
	BINDER			
	PIGMENT			
	MATERIAL USED TO PROTECT THE SURFACE	Industrial paints, degraded, damaged – low corrosion protection		
	LOCATION OF AN OBJECT IN A PLACE NEGATIVELLY			
	AFFECTING ITS LASTING			
	SETTING OF FOUNDATIONS			
	UNSTABLE SUPPORT			
	FOUNDATIONS AND NONE FOUNDATIONS			
	TYPE OF GROUND			
	TECTONIC MOVES			
	VIBRATIONS, SHAKES			
	SOIL DAMP			
LATER INTERFERENCES				
	REPARATIONS			
	RENOVATION OF A BUILDING			
	SETTING UP A NEW INSTALLATIONS			
	REPAINTING			
	LATER CONSERVATIONS-RESTAURATIONS			
	VANDALISM	Sculpture was damaged by an excavator machine during construction works.		
		Inscriptions in the paint, abrasions, graffiti		
THERMAL-HUMIDITY FACTORS				
	CAPILLARY MOISTURE			

	MOISTURE CONDENSATION			
	WATER INFILTRATION FROM RAINFALLS, SNOW FALLS			
	AND/OR BUILDING INTALATIONS			
	SORPTION MOISTURE			
	BUILDING CONSTRUCIONAL MOISTURE			
THERMAL FACTORS				
	TEMPERATURE FLUCTUATIONS	High fluctuations causing stress on metal and paint layer		
	(DAILY, SEASONAL, ANNUAL)			
	GEOGRAPHIC LOCATION OF THE OBJECT			
	(N, S, E, W)			
	SEASONAL FROST PENETRATION	possible		
	SUNLIGHT INFLUENCE	Complete exposure		
	HIGH TEMPERATURE INFLUENCE	Yes, during summer		
PHYSICO-CHEMICAL FACTORS				
	AIR POLLUTION	High - road, oil refinery close by		
	SALT IN THE AIR			
	SALT DISSOLUTION AND CRYSTALIZATION			
	CORROSION	Yes, active		
BIOLOGICAL FACTORS				
	ANIMAL ACTIVITIES	Possible		
	MICROORGANISMS			
	FUNGUS			
	MOLDS			
	ALGAE			
	MOSS (lichens)			
	PLANTS (SHRUBS, TREES)			

MECHANICAL FACTORS			
	MECHANICAL INJURIES	Yes, breaks and twisting from the excavator machine	
	ABRASIONS	yes	
	ATTENDANCE OF THE LARGE GROUPS OF HUMANS		
	INDUSTRIALIZATION	Yes – high levels of pollution – corrosive action	
OTHERS			