

MANAGEMENT COMMITTEE MEETING

Wroclaw, 1st March 2018

José C. Matos Chairman



ESF provides the COST Office through a European Commission contract



COST is supported by the EU Framework Programme



Good afternoon to everybody !

Acknowledgments to Local Organizers and to Wrocław University of Science and Technology.

Prof. Jan Bień



Prof. Tomasz Kamiński







Tour de Table / Introduction of new MC members. Those MC members who were not in previous MC meetings, please stand-up and present yourselves.





Establishment of Quorum





Reimbursement Policies

> In order to be reimbursed you need to receive the e-COST invitation by e-mail and accept it in due time. Otherwise you cannot be reimbursed.

> Then, you need to fill a reimbursement form in e-COST platform. After filling the form, you will have to print, sign and send it to the COST Action TU 1406 secretary (Ms Lara Leite).

> All **originals invoice/ticket** must be sent to the secretary by e-mail or, in case of some original tickets without e-version, mailed to University of Minho, Grant Holder (Ms. Lara Leite), within <u>30 calendar days</u>.

> Use the following address for sending the original invoices/tickets:

University of Minho Att/ Ms. Lara Leite Department of Civil Engineering Campus Azurém 4800-058 Guimarães PORTUGAL





Reimburcement Policies

- Eligibility for reimbursement: Provide your signature in such attendance list, or you are not eligibility for reimbursement.
- ► <u>Accommodation</u>: Flat rate: 120€ /per night + The number of nights to be reimbursed are equal to the attending meeting days plus one.
- ➤ <u>Meals:</u> Flat rate: 20€ /per person/per eligible meal + Meals provided by LOS are deducted from the number of meals to be reimbursed.
- Airplane, Train or Bus, Car and Ferry: Maximum: EUR 1 200 + Only economy class tickets are eligible for reimbursement + In the applicable case, the participants must submit as a supporting document the original ticket and view trip mentioning the name of the passenger, the price, dates of travel, departure and arrival times and the booking class (essentially the full itinerary of the trip) + For Train or Bus, business and economy class tickets are eligible for reimbursement; and supplements for fast trains and sleepers are eligible expenses + Car travel is limited to a maximum distance of 2 000 km and is reimbursed at EUR 0.20 per km.
- Local transport expenses: Include any transport costs (including shuttle, buses, trains, metro, tramway, taxis, car costs (up to 2000 km) and parking costs), incurred on the normal route between home and local of event + If the claimed amount is less than EUR 25, no tickets are required + If the claimed amount exceeds EUR 25, receipts justifying the total amount claimed must be provided.



The objective of COST is to support networking in a topic of excellence ...



Some REMARKS:

- (i) COST do not support any company promoting activities;
- (ii) In order to be reimbursed you need to <u>receive an e-COST invitation by email and</u> <u>accept it within two weeks</u>. There exist two hypothesis:
 - You are a MC member and you are automatically invited for MC meeting;
 - You are a WG member and you are considered eligible, according to the criteria previously established by the Core Group;
- (iii) In case you do not accept the e-COST invitation, your invitation will be automatically cancelled and you will not receive another invitation for the same meeting;
- (iv) For MC members, if you cannot attend, and want to be replaced by your MC substitute, you should inform the Grant Holder (Ms. Lara Leite) about this by email, in due time as time does not stop (2 weeks).



2. ADOPTION of AGENDA

- 1. Welcome
- 2. Adoption of agenda
- 3. Approval of minutes and matters arising of last meeting
- 4. Update from the Action Chair
 - a. Action Status, *including Participating Countries*
 - b. Dissemination
 - c. Action budget status
 - d. STSM status
- 5. Promotion of gender balance and Early Stage Researchers (ESR)
- 6. Update from the Grant Holder
- 7. Update from the COST Association
- 8. Follow-up of MoU objectives
 - a. Progress report of working groups (WG3, WG4 and WG5)

- 9. Scientific planning
 - a. Scientific strategy
 - b. Action Budget Planning
 - c. Long-term planning (including anticipated locations and dates of future activities)
 - d. Dissemination planning (Publications and outreach activities)
- 10. Requests for new members
- 11. Non-COST applications to the Action
- 12. Any Other Business (AOB)
- 13. Location and date of next meeting
- 14. Summary of MC decisions
- 15. Closing



3. APPROVAL OF MINUTES and MATTERS arising of LAST MEETING

 Zagreb meeting minutes were approved by e-voting procedure. They can be downloaded in the following link:

http://www.tu1406.eu/wp-content/uploads/2017/04/COST-TU1406-4th-MC-MEETING-Minutes.pdf Matters arising of last meeting ...





Minutes of 4th MC Meeting



03-03-2017 18:30 CET Room 58 ZU, Zagreb : Listed in Appendix A

Minutes of 4th MC Meeting – BridgeSpec – 03.03.2017

Topic 1 - Opening and welcome by Prof. Dr. José Matos, Chair of the Action (18:30 CET)

- Tour de table/Introduction of new MC members
 - Lennart Elfgren, Sweden
 - Maria Pina Limongelli, France
- Establishment of quorum
- Reimbursement policies
 - Invitations must be accepted within 2 weeks
 - If cancelled, or not accepted, MC Members should inform Ms. Lara Leite, and suggest to contact the Substitute Member. This should be done within this timeframe



3. APPROVAL OF MINUTES and MATTERS arising of LAST MEETING

- The intermediary report was successfully submitted and assessed by the Rapporteur. The results
 was an "Excellent" Scientific/Technological and Policy Outcomes and Impact and a "Moderate"
 General Risk/Ambition Level of Action MoU objectives and deliverables;
- After some efforts, **Romania** is now represented at the MC. An additional effort is welcome to involve colleagues from NNC and IPC;
- Two **special issues** of an international journal are under preparation, namely, "Structure and Infrastructure Engineering" and "Structure Engineering International";
- It is very important the coordination of all **sub groups** activities, and an effort should be made to guarantee that;
- A focus should be relied on the **dissemination activities** (WG6). In order to do so, all are invited to contribute with videos, news, etc., so that we are able to disseminate in all platforms;
- Both WG1 and WG2 **reports** are being assessed by IAB and the MC Observers. The objective is that a new version of those reports could be published until end 2018. Concerning WG1 (A. Strauss) and WG2 (I. Stipanovic), respectively, the PI database and the developed multi criteria software will be integrated on the website.



CSO Approval: 13-11-2014

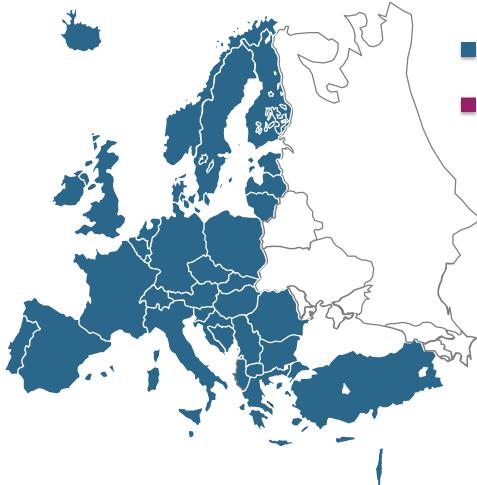
Start of the Action: 16-04-2015

End of Action: 15-04-2019

Total Number of COST countries accepting MoU: **37**

Total Number of COST countries intending to accept MoU: 0





- **37 Action represented countries**
- 0 Missing Countries



Recent nominations:

- Marija Maric
 - MC Member from Croatia
- Henriette Szigalyi
 - MC Member from Romania
- Gabriela Proca
 - MC Member from Romania
- Andrej Anzlin
 - MC Member from Slovenia



Recent nominations:

- Niels Peter Hoj
 - MC Member from Switzerland

To be elected as Leader of the Industrial Advisory Board

- Poul Linneberg
 - MC Member from Denmark

To be elected as Vice Leader of the Industrial Advisory Board



Recent nominations:

- Matias Valenzuela
 - MC Observer from Chile

To be elected as Leader of the External Advisory Board

- Colin Caprani
 - MC Member from Australia

To be elected as Vice Leader of the External Advisory Board



The main objective of the Action is to

develop a guideline for the establishment of QC plans in roadway bridges

by integrating the most recent knowledge on performance assessment procedures with the adoption of specific goals. This guideline will focus on bridge maintenance and life-cycle performance at two levels: (i) performance indicators, (ii) performance goals.



Developing a state-of-art report;

Creation of a database;



Incorporation of sustainable indicators.



(i) Systematize knowledge on QC plans for bridges, which will help to achieve a **state-of-art report that includes performance indicato**rs and respective goals;

(ii) Collect and contribute to up-to-date **knowledge on performance indicators**, **including technical, environmental, economic and social indicators**;

(iii) Establish a wide set of quality specifications through the definition of performance goals, aiming to assure an expected performance level;

(iv) Develop detailed examples for practicing engineers on the assessment of performance indicators as well as in the establishment of performance goals, to be integrated in the developed guideline;



(v) Create a database from COST countries with **performance indicator values** and respective goals, that can be useful for future purposes;

(vi) Develop a **webpage with information about the Action and its participants**, as well as, video-streaming from presentations at training schools, workshops and conferences, e-lectures, **written material (e.g. technical reports)**, etc.;

 \checkmark

(vii) Support the development of technical/scientific committees;

(viii) Disseminate activities, such as Short-Term Scientific Missions (STSM), training schools and other teaching activities (e.g. e-lectures), for practicing engineers and researchers, regular workshops, a conference and special sessions at international conferences.



Activity/Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Meeting	¥		¥	¥		¥		¥		¥		Χ		Х		Х
Workshop	¥			¥				¥				X				
Conference																Х
Training school								¥				Х				Х
STSM	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	X	Х	Х	Х	Х
Website	¥			¥		¥		¥		¥		Х		Х		Х
Milestone				M1				M2		M3				M4		M5

• MC meeting – 3 (GEN, CH), 12 (BEL, SB), 24 (ZG, HR), 36 (WRO, PL) and 48 months

WG meeting – 3 (GEN, CH), 9 (BUD, HU), 12 (BEL, SB), 18 (DFT, NL), 24 (ZG, HR), 26 (PA, FR), 32 (RIG, LV), **36 (WRO, PL)**, 42 and 48 months



• WG meeting occurred in Paris, France, on the 12th May 2017.





 The 2nd Training School occurred in Prague, Czech Republic, on the 25th – 28th September 2017, in Czech Technical University in Prague.



E-Book: http://www.tu1406.eu/wp-content/uploads/2017/12/TU1406_PRAGUE_TSCHOOL_eBook.pdf



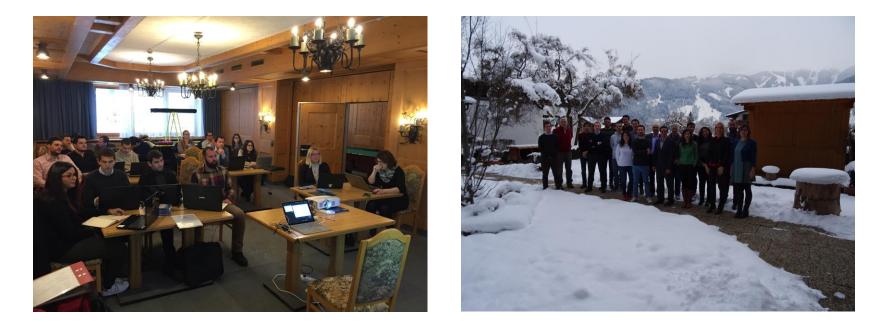
• WG meeting occurred in Riga, Latvia, on the 23th – 24th November 2017.



E-Book: to be submitted soon by A. Paeglitis



 The 3rd Training School occurred in Zell am See, Austria, on the 18th – 21th December 2017, in Hotel St. Hubertushof.



E-Book: to be submitted soon by A. Strauss and H. Wenzel



WG1 : Performance indicators

Report of Performance Indicators (incorporating new indicators)

http://www.tu1406.eu/wp-content/uploads/2016/10/COST_TU1406_WG1_TECH_REPORT.pdf

VG2: Performance goals

Report of Performance Goals (incorporating new indicators)

http://www.tu1406.eu/wp-content/uploads/2017/11/tu1406_wg2.pdf

WG3: Establishment of a QC plan

European Survey and Recommendations for the Establishment of a QC plan (with detailed examples for practicing engineers)

WG4: Implementation in a Case Study

Database from Benchmarking (from COST countries)

WG5: Drafting of guideline / recommendations

Guideline for the Establishment of a QC plan



WG			Yea	ar 1			Yea	ar 2			Yea	ar 3			Yea	ar 4	
		Q1	Q2	Q3	Q4												
	Technical-indicators	¥	¥	¥	¥												
₩G1	Environmental indicators	¥	¥	¥	¥												
	Other indicators	¥	¥	¥	¥												
	Technical goals	¥	¥	¥	¥	¥	¥	¥	¥								
₩G2	Environmental goals	¥	¥	¥	¥	¥	¥	¥	¥								
	Other goals	¥	¥	¥	¥	¥	¥	¥	¥								
₩G3	Survey of European roadway QC plans	¥	¥	¥	¥	¥	¥										
*****	Procedures for the establishment of a QC plan							¥	¥	¥	¥						
	Selection of case studies							¥	¥	¥							
WG4	Benchmarking										¥	¥	x	x	X		
	Application on a QC plan											¥	X	X	x		
	Standardized performance indicators				¥	¥	¥	¥									
WG5	Standardized goals								¥	¥	¥	¥					
	Standardized QC plan										¥	¥	x	x	x	x	x
WG6	Dissemination	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	x	x	x	x	x



Activity/Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Milestone				M1				M2		M3				M4		M5



- Report on performance indicators
 - General description
 - Assessment methods (e.g. visual inspection, non-destructive tests, monitoring systems, etc.)
 - Frequency of assessment
 - Obtained values
 - General recommendations
 - Publication in refereed scientific journal papers (special issue) and in international conferences
 - Workshop at the end of this task (Belgrade, Serbia)



2 - Report on performance goals

- Description of technical, environmental, economic and social factors
- Goals computation methods
- Frequency assessment
- General recommendations
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Workshop/Training School at the end of this task



Activity/Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Milestone				M1				M2		M3				M4		M5



- 3 Recommendations for the establishment of a QC plan
 - Bayesian nets or other heuristic rules (used worldwide)
 - Establishment of a procedure for the definition of QC plan for each individual bridge/component
 - Publication in refereed scientific journal papers (special issue) and in international conferences
 - Workshop/Training School at the end of year 3

M4 – Preparation of a database from benchmarking

- Obtained results will validate the outcomes of WG1, WG2 and WG3
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Conference/Training School at the end of year 4

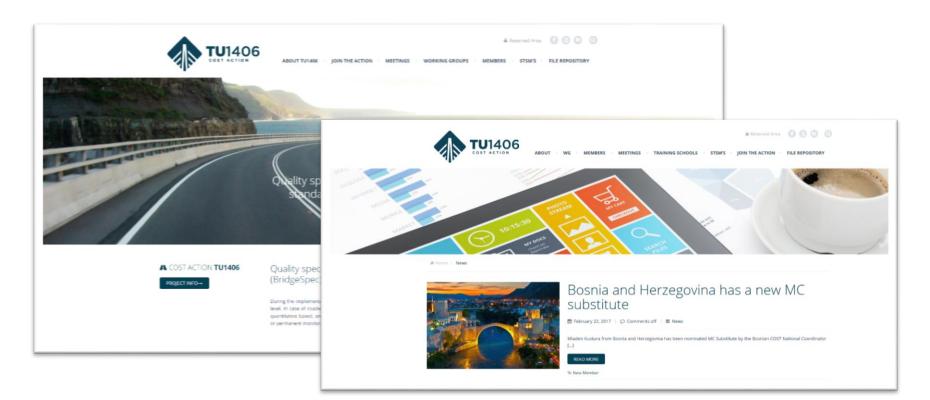
M5 – Guideline/recommendations

- Development of a new guideline for the establishment of QC plans
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Conference/Training School at the end of this task



4. UPDATE FROM ACTION CHAIR Dissemination

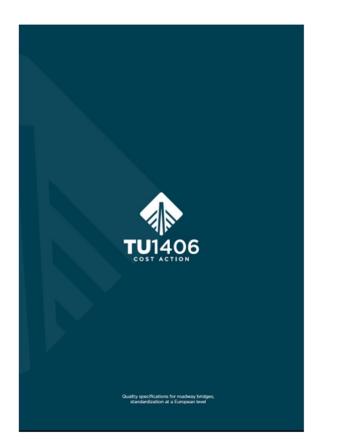
TU 1406 Website (maintenance activities) - www.tu1406.eu





4. UPDATE FROM ACTION CHAIR Dissemination

TU 1406 WG2 Report





TU 1406 Pins



TU 1406 Brochures



4. UPDATE FROM ACTION CHAIR Action budget status – 1st Grant Period

Description	Predicted	Realized
A – COST Networking Tools		
A.1 – Meetings	128.880,00 €	111.285,73 €
A.2 – Training Schools	0,00€	0,00€
A.3 – Short Term Scientific Missions (STSM)	10.000,00€	10.920,00€
A.4 – Dissemination	8.460,00 €	11.250,00 €
A.5 – OERSA	486,00 €	0,00€
B – Total Science Expenditure (sum A.1-A.5)	147.826,00 €	133.455,73€
C – FSAC (máx. 15% of B)	22.174,00 €	20.018,36 €
D – Total Expenditure (B + C) (*)	170.000,00€	153.474,09€

(*) 90% of execution rate



4. UPDATE FROM ACTION CHAIR Action budget status – 2nd Grant Period

Description	Predicted	Realized
A – COST Networking Tools		
A.1 – Meetings	88.150,00€	77.358,83€
A.2 – Training Schools	19.650,00 €	19.743,70 €
A.3 – Short Term Scientific Missions (STSM)	10.000,00€	12.000,00€
A.4 – Dissemination	4.308,69€	5.162,00€
A.5 – OERSA	500,00€	0,00€
B – Total Science Expenditure (sum A.1-A.5)	122.608,69€	114.264,54 €
C – FSAC (máx. 15% of B)	18.391,30 €	17.139,68 €
D – Total Expenditure (B + C) (*)	140.999,99€	131.404,21 €

(*) 93% of execution rate



4. UPDATE FROM ACTION CHAIR Action budget status – 3rd Grant Period

Description	Predicted	Dispended	Balance
A – COST Networking Tools			
A.1 – Meetings	115.221,08€	68.678,25€	46.542,83€ (**)
A.2 – Training Schools	36.470,00€	31.375,79€	5.094,21 €
A.3 – Short Term Scientific Missions (STSM)	10.352,85€	9.400,00€	952,85 € (***)
A.4 – ITC Conference Grant	1.000,00€	2.500,00€	-1.500,00 € (****)
A.5 – Dissemination	6.021,30€	1.500,00€	4.521,30 € (*****)
A.6 – OERSA	500,00€	- €	500,00€
B – Total Science Expenditure (sum A.1-A.6)	169.565,23€	113.454,04 €	56.111,19€
C – FSAC (máx. 15% of B)	25.434,78€	17.018,11 €	6.590,59€
D – Total Expenditure (B + C)	195.000,00 € (*)	130.472,15€	62.701,78€

(*) There was an increase of 14.000,00 €, in the initial budget of 181.00,00 €, to allocate the ITC Conference Grant).

(**) Wroclaw (Poland) & Sofia (Bulgaria) meetings

(***) One STSM missing, to be covered by training schools (proposal)

(****) Covered by training schools - approved by Core Group

(*****) Pins / Brochuras and WG3 report publishing



- 1st Assessment Procedure:
- 2nd Assessment Procedure:
- 3rd Assessment Procedure:
- 4th Assessment Procedure:
- 5th Assessment Procedure:
- 6th Assessment Procedure:

September 2015 (*) January 2016 June 2016 January 2017 June 2017 January 2018

(*) This was due to the restriction, associated to the starting of the Grant period

- Call Status: permanent
- **Decisions:** applications collected during each 2 months will be assessed, and decisions announced to the end of the subsequent month
- **Number of grants:** limited by available funds



- STSM applicants must be engaged in a running research program, as a postgraduate student or postdoctoral fellow, or be employed by or officially affiliated to an institution or legal entity;
- Duration of the STSM should be between 5 and 90 days. Recommended duration is 3-4 weeks;
- In order to receive a STSM grant, the applicant must:
 - ✓ Obtain the written agreement of the promotor of the host institution, before submitting an application;
 - ✓ Complete the online application form (see https://e-services.cost.eu/stsm);
 - Send the completed file as e-mail attachment together with the necessary \checkmark supporting documents (CV, full work plan, list of publications, motivation letter, letter of support from the home institution etc.) to the local promotor of the STSM host institution and to the MC Chair (Jose Matos - UMinho jmatos@civil.uminho.pt)), as well as the STSM coordinator (Jan Bien: stsm@tu1406.eu and jan.bien@pwr.edu.pl Guido Roeck: or De guido.deroeck@bwk.kuleuven.be).



Criterion description	Comments
Complete set of application documents and fulfilment of all required conditions	negative mark stops the evaluation procedure
Conception of STSM: objectives, host institution, expected results, etc.	based on proposal
Plan of activities: program of work, timetable, form of results, dissemination plan, etc.	based on proposal
Potential benefits to COST Action TU1406: conformity with Working Group targets, current activity in Working Group, etc.	based on proposal
Potential benefits to the Applicant	based on proposal
Applicant experience and research activity	based on CV
Early Stage Researcher (ESR)	up to 8 years of experience after the PhD



Next call – June 2018



COST ACTION TU1406

SLIDE 36

4. UPDATE FROM ACTION CHAIR STSM status – 1st Grant Period

STSM Applicant	Nikola Tanasić						
Home Institution	Faculty of Civil Engineering, University of Belgrade, Serbia						
Host Institution	University of Natural Resources and Life Sciences, Vienna, Austria						
STSM proposed start date	28/09/2015 - 13/10/2015						
Торіс	Quality control plans for roadway bridges affected by flooding hazard						
STSM Applicant	Ivan Zambon						
Home Institution	University of Natural Resources and Life Sciences, Vienna, Austria						
Host Institution	University of Minho, Guimarães, Portugal						
STSM proposed start date	02/11/2015 - 22/12/2015						
Торіс	Performance indicators associated with degradation of bridges						
STSM Applicant	João Fernandes						
Home Institution	University of Minho, Guimarães, Portugal						
Host Institution	Technical University of Catalonia (UPC)						
STSM proposed start date	29/02/2016 - 01/04/2016						
Торіс	Performance indicators for the assessment of existing bridges						



4. UPDATE FROM ACTION CHAIR STSM status – 1st Grant Period

STSM Applicant	Ciarán Hanley							
Home Institution	University College Cork, Cork, Ireland							
Host Institution	University of Minho, Guimarães, Portugal							
STSM proposed start date	07/03/2016 - 28/03/2016							
Торіс	Quality specifications for roadway bridges, standardization at a European level (BridgeSpec)							
STSM Applicant	Nina Serdar							
Home Institution	University of Montenegro, Podgorica, Montenegro							
Host Institution	University Federico II, Naples, Italy							

Non destructive methods for defining roadway bridge performance indicators



Topic

4. UPDATE FROM ACTION CHAIR STSM status – 2nd Grant Period

STSM Applicant	Mariano Zanini
Home Institution	University of Padova, Italy
Host Institution	Universitat Politècnica de Catalunya. UPC – BarcelonaTech, Spain
STSM proposed start date	03/10/2016 - 01/12/2016
Торіс	Analysis of the existing environmental/economic/social performance indicators & goals and correlation with technical ones
STSM Applicant	Dimosthenis Kifokeris
Home Institution	Aristotle University of Thessaloniki, Thessaloniki, Greece
Host Institution	University of Minho, Guimarães, Portugal
STSM proposed start date	09/01/2017 - 17/02/2017
Торіс	Calibration and adaptation of the SB Method and Tool for bridge projects
STSM Applicant	Marija Petronijevic
Home Institution	Faculty of Civil Engineering, Belgrade, Serbia
Host Institution	Faculty of Civil and Environmental Engineering, Haifa, Israel
STSM proposed start date	30/01/2017 - 18/02/2017
Торіс	Framework for creating BrIM model from point cloud data



4. UPDATE FROM ACTION CHAIR STSM status – 2nd Grant Period

STSM Applicant	Sérgio Fernandes							
Home Institution	ANSER, Lda							
Host Institution	University of Natural Resources and Life Sciences, Vienna, Austria							
STSM proposed start date	06/02/2017 - 17/02/2017							
Торіс	WG1 Performance Indicators and Glossary Database Repository							
STSM Applicant	Zaharah Allah Bukhsh							
Home Institution	University of Twente, Enschede, Netherlands							
Host Institution	Trinity College Dublin, The University of Dublin, Dublin, Ireland							
STSM proposed start date	06/02/2017 - 26/02/2017							
Торіс	Multi-objective decision support model to optimize bridge performance goals							



4. UPDATE FROM ACTION CHAIR STSM status – 3rd Grant Period

STSM Applicant	Dusan Isailovic						
Home Institution	University of Belgrade, Serbia						
Host Institution	University of Minho, Portugal						
STSM proposed start date	04/09/2017 - 13/10/2017						
Торіс	Bayesian networks application in Quality Control Plan						
STSM Applicant	Anja Vidovic						
Home Institution	University of Natural Resources and Life Sciences, Austria						
Host Institution	IFSTTAR, France						
STSM proposed start date	01/10/2017 – 31/10/2017						
Торіс	Classification of Research Performance Indicators based on Parameter Readiness Level						



4. UPDATE FROM ACTION CHAIR STSM status – 3rd Grant Period

STSM Applicant	Henar Martin Sanz
Home Institution	ETH Zurich, Switzerland
Host Institution	ZAG institut, Slovenia
STSM proposed start date	30/10/2017 – 20/11/2017
Торіс	Extraction of Performance Indicators for UHPFRC strengthened bridge structures
	Marija Deceveka
STSM Applicant	Marija Docevska
Home Institution	University Ss.Cyril and Methodius, Macedonia
Host Institution	University of Mihno, Portugal
STSM proposed start date	05/03/2018 – 23/03/2018
Торіс	Implementation of quality control plans in two case studies

http://www.tu1406.eu/stsms



5. PROMOTION OF GENDER BALANCE AND EARLY STAGE REASEARCHERS (ESR)





5. PROMOTION OF GENDER BALANCE AND EARLY STAGE REASEARCHERS (ESR)

Excellence and Inclusiveness

Gender Balance

- ESR females are using STSM's (43%);
- Increase the number of female WG members (21%);
- Invite a female to be a Keynote in the next Workshop (LOS).

Early Stage Researchers (ESR)

- Increase the number of STSM's;
- Increase the number of ESRs as WG members;
- Invite a ESR to be a Keynote in the next Workshop (LOS).

Geographical Coverage

- Involve more partners from Norway, Hungary, Malta, Finland, Italy and Turkey;
- Increase the number of NNC.



5. PROMOTION OF GENDER BALANCE AND EARLY STAGE REASEARCHERS (ESR)

Excellence and Inclusiveness

International Cooperation

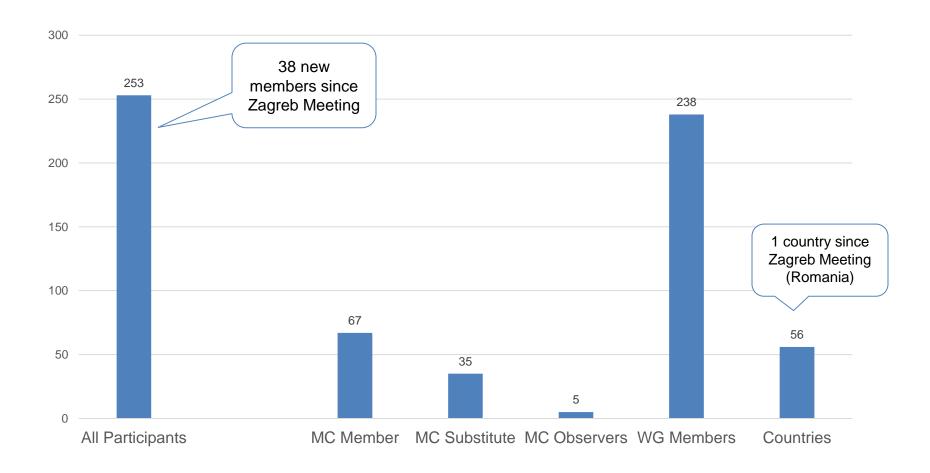
- Involve more partners from IPC.



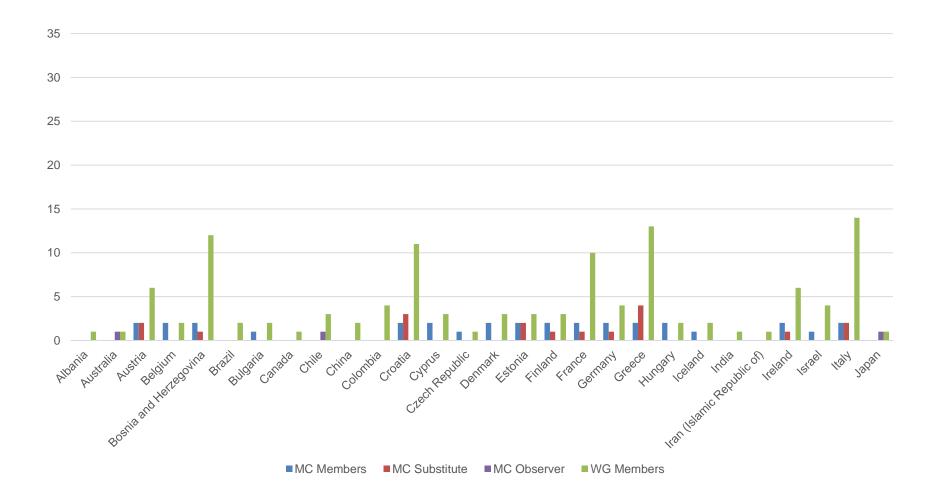
SME & Industry Cooperation

- Increase the number of SME & Industry members as WG members (40%);
- Increase the number of SME & Industry members on WG meetings (±30%);
- Invite a SME & Industry partner to be Keynote in the next Workshop (LOS).

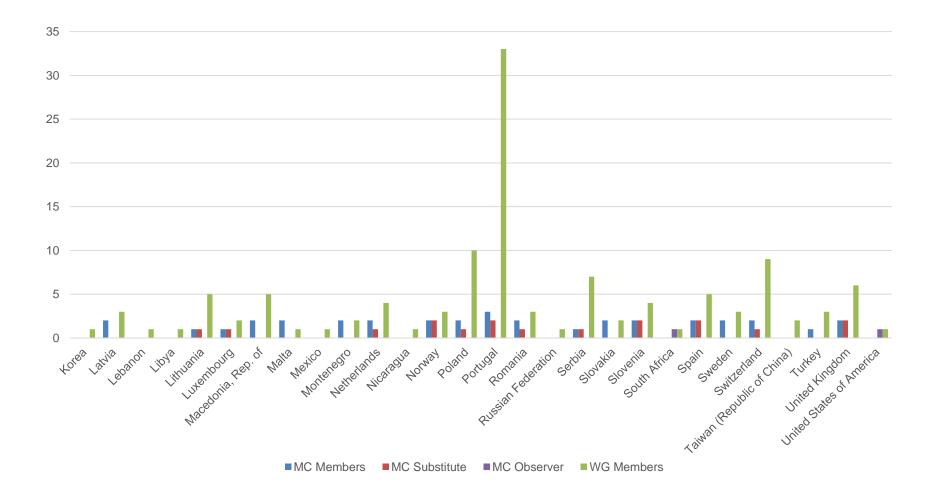




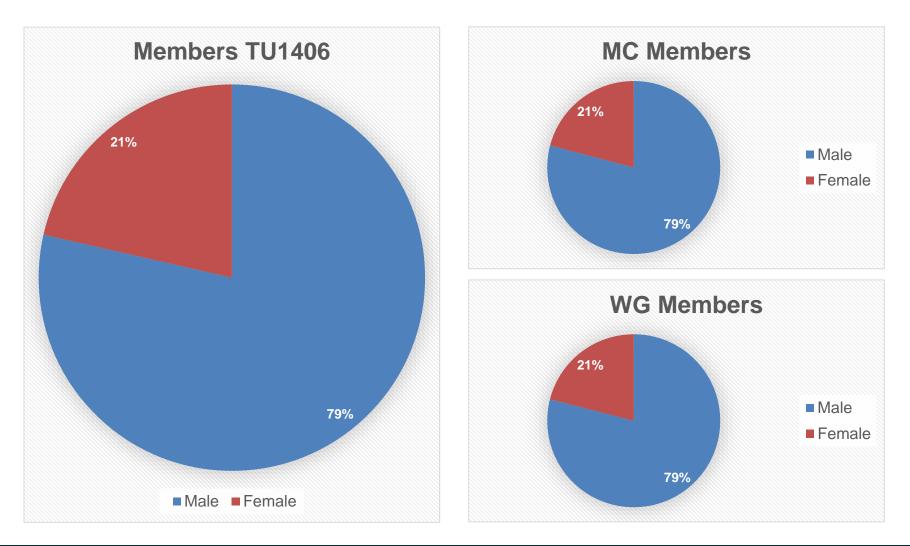




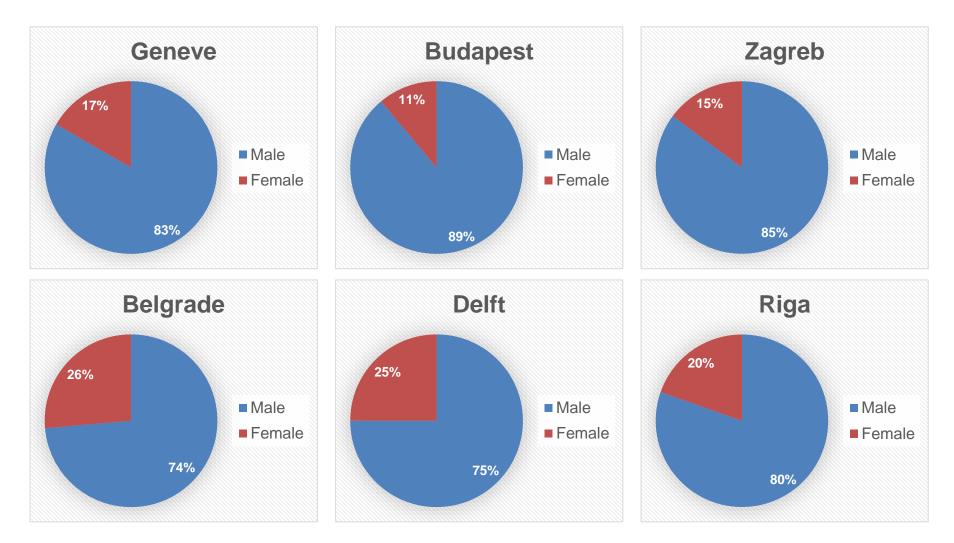








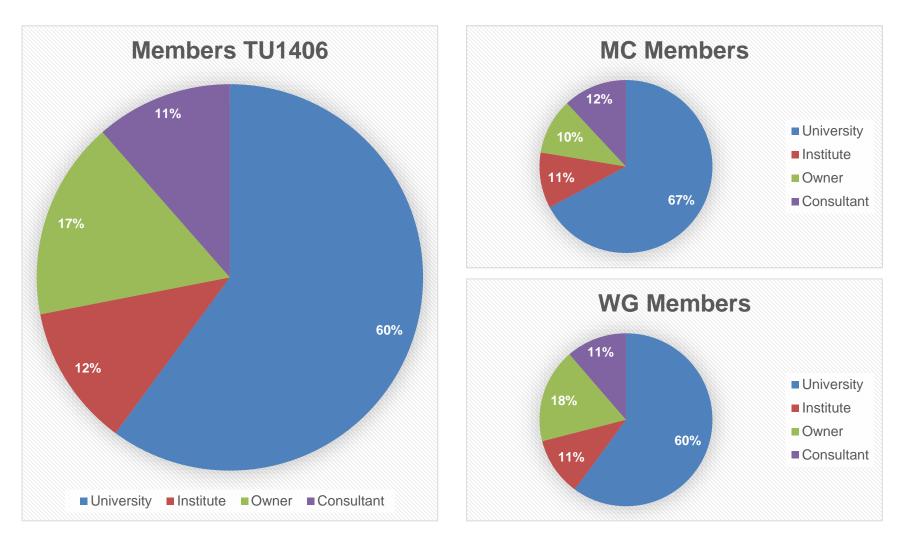




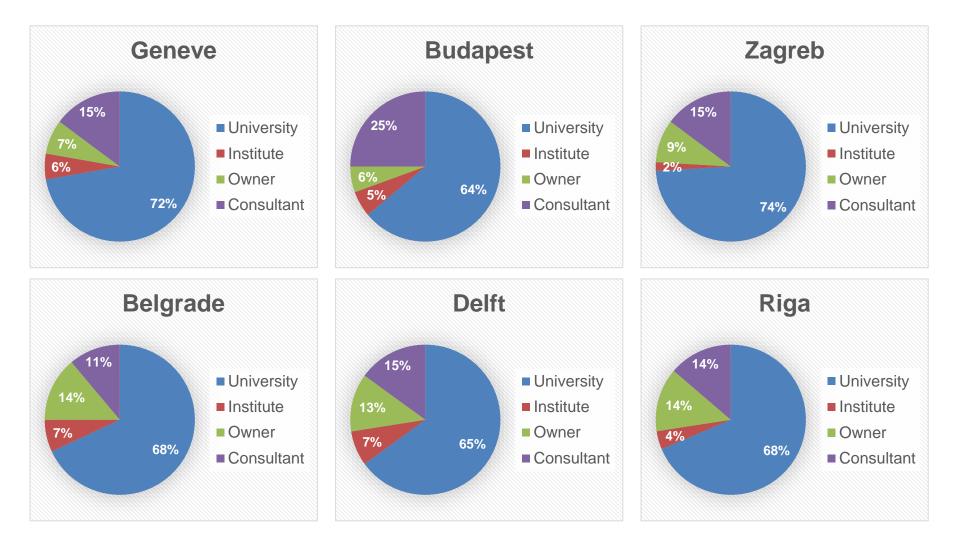


COST ACTION TU1406

SLIDE 50









COST ACTION TU1406

SLIDE 52

Administration



- Overall Budget:

The overall budget for the 4rd Grant Period is of **200 000 EUR**, this is to include the current COST Action TU 1406 activities (191 000 EUR) plus an additional amount for the additional standardization issues w/ CEN, ISO, fib MC and JCSS (9 000 EUR).

\checkmark

Extension is in progress:

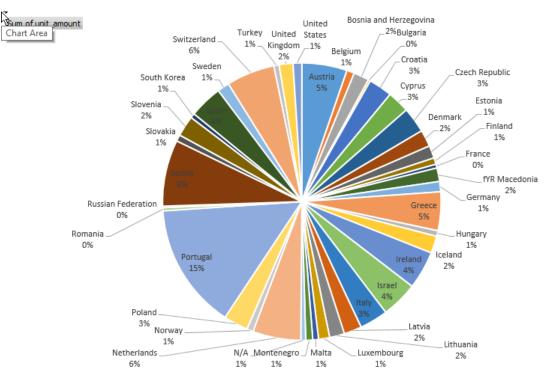
At this stage it is being in preparation the extension of this Action to the end of 2019, plus an additional amount to take into account the standardization activities. A core group meeting is also planned for June/July 2019.

 Possibility for FAD application (as extra budget)?
 <u>http://www.cost.eu/FAD_application_template</u> (Assign writers / reviewers / proof readers)



Administration

 \checkmark – Expenditure distribution per country (shows good diversity):





- Dissemination Target:
 - To the world, by addressing key countries working on similar initiatives;
- To industry, through standardisation activities and an exploitation of the European industry interest – please communicate successful stories in your countries (IAB);
 - To policy, by elaborating a Future Policy Sheet (// Future Research Sheet)

Is there any part of the research coordination that you are doing giving ground to policy recommendations? For example, what would the Action say to European Policymakers asking about the actions to take for increasing the safety of roadway bridges in Europe?

 To society, by providing an impact on non-academic literature / societal value of your research.



- Capacity building, by improving the:
 - Submitting an ITN Marie Curie application?
 - Impact on education and courses (e.g. teaching material)?
- Additional Request (H2020 Public Consultation, please include some keywords such as "bridges", "quality control", "performance indicators", "performance goals", "management", etc.)

<u>https://ec.europa.eu/info/consultations/public-consultation-eu-funds-area-investment-</u> <u>research-innovation-smes-and-single-</u> <u>market_en?utm_campaign=unspecified&utm_content=unspecified&utm_medium=email&ut</u> <u>m_source=apsis-anp-3</u>



WG3 – Establishment of a Quality Control Plan



Goal

- Based on the results of the WG 1 and 2 as well as on survey of existing approaches in practice the objective of this group is to provide a methodology with detailed stepby-step explanations for establishment of QC plans for different types of bridges. The QC plans will address the dynamics and uncertainty of the processes that may significantly comprises the bridge performance.
- The QC plan has to relate to performance goals, which are defined according to the Dutch RAMSSHE€P approach
 - Reliability, Safety
 - Availability, Costs, Environment
 - Maintainability, Security
 - Health
 - Politics



Where are we now?

- Groundwork laid in Belgrade March 2016
- General Framework presented during the Delft meeting October 2016
- Enhanced before Zagreb meeting March 2017
- TG provided 10 pages report for Paris meeting May 2017
- Review and internal discussions for Nicosia meeting July 2017
- TOC prepared for and discussed in Skype meeting in August 2017
- TG submitted theirs drafts of final report by the end of September 2017
- Report is being finalized



Report TOC – Introductory part

- 1. Introduction
- 2. Terms and Concepts
- 3. Quality of Road Bridges
- 4. Damage processes
- 5. Performance indicators and observations
- 6. Quality Control Framework



Report TOC – Applications I

- 7. Application of QC Framework to Frame and Girder Bridges
 - Specificities of Frame and Girder Bridges
 - Damage processes
 - Vulnerable zones
 - Observations
 - Illustrative Example
- 8. Application of QC Framework to Arch Bridges
 - Specificities of Frame and Girder Bridges
 - Damage processes
 - Vulnerable zones
 - Observations
 - Illustrative Example



Report TOC – Applications II

- 9. Application of QC Framework to Sudden Events
 - Characterization of sudden events
 - Influence of observations on KPI
 - Illustrative Example
- 10. Human Resources and Equipment
 - Inspectors requirements and guidelines
 - Requirements on equipment
 Selecting the equipment needed
 Use and maintenance of equipment
- 11. Conclusions and open issues



What's left to do (compared to Riga)?

- Still finishing the introductory part
- Consolidation and synchronization of chapter (partly done)
- Compressing and shortening (partly done)
- Appendices with examples (done)
- Synchronization with other WG's (partly done)
- Final draft by the end of the year (nope, end of March)
- Publishing in Q1 2018 (nope, Q2)



WG4 – Implementation in a Case Study



Case study Bridge Selection– Summery of Country submission

	Country	Submision	Girder	Arch	Frame					
1	Austria	yes	V	V	V					
2	Bosnia and Herzegovina	yes	VV	VV	VV					
3	Croatia	yes	V	V	V					
4	Czech Republic	yes	V	V	V					
5	Estonia	yes	V	V	V					
6	Finland	yes	V	V	V					
7	France	yes	V	-	VV					
8	Germany	yes	V	V	V					
9	Greece	yes	V	V	V					
10	Israel	yes	V	V	V					
11	Latvia	yes	V	-	-					
12	Lebanon	yes	V	-	-					
13	Macedonia	yes	V	V	V					
14	Montenegro	yes	V	V	V					
15	15 Netherlands yes		V	V	V					
16	Poland	yes	VV	-	-					
17	Portugal	yes	V	V	V					
18	Spain	yes	V	V	-					
19	19 Switzerland yes		V	V	V					

1	Belgium	no
2	Bulgaria	no
3	Cyprus	no
4	Denmark	no
5	Hungary	no
6	lceland	no
7	Ireland	no
8	Italy	no
9	Lithuania	no
10	Luxemburg	no
11	Malta	no
12	Norway	no
13	Republic of Serbia	no
14	Romania	no
15	Slovakia	no
16	Slovenia	no
17	Sweden	no
18	Turkey	no
19	United Kingdom	no

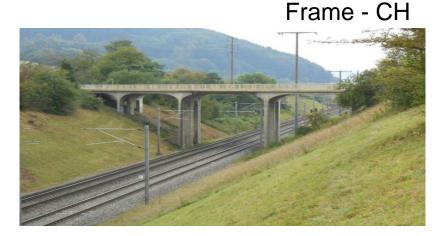




Girder GR

Arch - CZ







COST ACTION TU1406

SLIDE 66











Girder CZ



ID	Task Name		2015		2016			2017				2018				2019	
U	I dSK Ndille	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
1	Establishment of Case study Bridge database																
2	Prototype Case study selection																
3	Development of QCP for prototype case study per Sub Group																
4	Preparation of case study Benchmarking & QCP instructions																
5	First internal report and coordination with WG3 QCP report														7		
6	Implementation in other case studies																
7	Updating case study database																
8	Preparation of final report																



WG5 – Drafting of Guideline / Recommendations



8. FOLLOW-UP OF MoU OBJECTIVES WG5: Follow Up since Riga Meeting

O1. **Liaison** with relevant standardising bodies: Started. Key liaisons discussed, and work carried out are around ISO, CEN TC350 and some with CEN TC250. Vikram Pakrashi to attend one meeting in Norway in the next months. Helmut Wenzel had first meetings with ISO and CEN and they are happy to have COST TU1406. Helmut has contributed to some phrases on maintainability and will propose material for an Annex to ISO referring to practical application to bridges. This will be in May 18. We can expect something to show by the end of the year. Checkpoint: WG5 e-meeting in early March 18 post Wroclaw.

O2. Meetings: Department of Transport Ireland by Vikram Pakrashi scheduled. Portuguese ISO/CEN group with Jose Matos scheduled.

O3. Fact-Sheets: Response <u>not great</u> to this point. Have sent multiple requests. Need to discuss and finalise through targeted contributors in Wroclaw meeting.

O4. A **Special Issue** in **ICE Infrastructure Asset Management** is approved. Expect call for papers out in early March 18.



8. FOLLOW-UP OF MoU OBJECTIVES WG5: Follow Up since Riga Meeting

O5. Draft of Background **lessons learnt** collection from experiences in different countries: Follow-up started. Need to finalise this in Wroclaw meeting.

O6. WG5 final report outline: Yet to develop a schematic. Need some more discussion around it. To be completed in Wroclaw meeting.

O7. Collaboration with members: Work and liaison with IBMS Sachin Joshi progressed well. This is to be strengthened post Wroclaw meeting.

O8. National perspectives and guidelines: Identified contributors not back yet - will need some more time. I will chase them up till the meeting but will finalise this my Wroclaw meeting end.

O9. Liaison with **other WG and Industry Advisory Board** - initiated. Will be better formalised during the Wroclaw meeting.

O10. Dissemination: IBMS 2018, IALCCE 2018 as planned. IABSE 2019 in Guimaraes should be a key dissemination area.



8. FOLLOW-UP OF MoU OBJECTIVES WG5: Work Planned Post-Wroclaw

O11. Training School (planned): 20-22 August 2018, University College Dublin. 4 trainers and 15 trainees. Objectives and topics to be decided further.

O12. STSM and Progress Discussions: Discussions ongoing. E-meeting on WG5 postponed to March 18 to take into account progress and inputs from other WGs and outcomes of Wroclaw meeting.



WG			Yea	ar 1			Yea	ar 2			Yea	ar 3			Yea	ar 4	
		Q1	Q2	Q3	Q4												
	Technical-indicators	¥	¥	¥	¥												
₩G1	Environmental indicators	¥	¥	¥	¥												
	Other indicators	¥	¥	¥	¥												
	Technical goals	¥	¥	¥	¥	¥	¥	¥	¥								
₩ G2	Environmental-goals	¥	¥	¥	¥	¥	¥	¥	¥								
	Other goals	¥	¥	¥	¥	¥	¥	¥	¥								
₩G3	Survey of European roadway QC plans	¥	¥	¥	¥	¥	¥										
**63	Procedures for the establishment of a QC plan							¥	¥	¥	¥						
	Selection of case studies							¥	¥	¥							
WG4	Benchmarking										¥	¥	¥	X	x		
	Application on a QC plan											¥	¥	x	x		
	Standardized performance indicators				¥	¥	¥	¥									
WG5	Standardized goals								¥	¥	¥	¥					
	Standardized QC plan										¥	¥	¥	x	х	x	x
WG6	Dissemination	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	¥	x	x	x	x



- WG2 will finalize the work by the end of the second Grant Period (WG2 Technical Report);
- WG3 will continue with the work until the end of the year 2017;
- WG4 should present results from case study selection;
- WG4 will continue the benchmarking, as well as the quality control plan application in real case studies;
- WG5 should present the results from the developed work, in cooperation with WG1 (performance indicators) and WG2 (performance goals);
- WG5 will continue the cooperation with WG3, using the developed data for standardization purposes;
- WG6 is running in parallel such as a subgroup ...



Activity/Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Milestone				₩1				M2		M3				M4		M5



- Report on performance indicators
 - General description
 - Assessment methods (e.g. visual inspection, non-destructive tests, monitoring systems, etc.)
 - Frequency of assessment
 - Obtained values
 - General recommendations
 - Publication in refereed scientific journal papers (special issue) and in international conferences
 - Workshop at the end of this task (Belgrade, Serbia)



2 - Report on performance goals

- Description of technical, environmental, economic and social factors
- Goals computation methods
- Frequency assessment
- General recommendations
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Workshop/Training School at the end of this task



Activity/Months	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45	48
Milestone				M1				M2		M3				M4		M5



- Recommendations for the establishment of a QC plan
 - Bayesian nets or other heuristic rules (used worldwide)
 - Establishment of a procedure for the definition of QC plan for each individual bridge/component
 - Publication in refereed scientific journal papers (special issue) and in international conferences
 - Workshop/Training School at the end of year 3

M4 – Preparation of a database from benchmarking

- Obtained results will validate the outcomes of WG1, WG2 and WG3
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Conference/Training School at the end of year 4

M5 – Guideline/recommendations

- Development of a new guideline for the establishment of QC plans
- Publication in refereed scientific journal papers (special issue) and in international conferences
- Conference/Training School at the end of this task



WG1 – Key Performance Indicators Report in Key Performance Indicators, including Operators and Researchers KPI Database Predicted date: end of April 2016. http://www.tu1406.eu/wp-content/uploads/2016/10/COST_TU1406_WG1_TECH_REPORT.pdf

WG2 Performance Goals Report in Performance Goals, including Operators and Researchers KPI Database Predicted date: end of April 2017. http://www.tu1406.eu/wp-content/uploads/2017/11/tu1406_wg2.pdf

WG3 – Establishment of a QC Plan Report in Establishing QC plans for different bridge types Predicted date: end of October 2017.

WG4: Implementation in a Case Study Database from Benchmarking (from COST countries)
WG5: Drafting of guideline / recommendations Guideline for the Establishment of a QC plan *Guidelines for Establishment of QC plan w/ Database from Benchmarking & Case Studies* eventually including the updating from other WGs, and using the FAD (extra budget)
Predicted date: 25-26 March 2019 (@ end COST Action TU1406).



TU1405

9. SCIENTIFIC PLANNING Action Budget Planning

Description	Value
A – COST Networking Tools	
A.1 – Meetings	119.990,00 €
A.2 – Training Schools	26.785,00 €
A.3 – Short Term Scientific Missions (4xSTSM)	10.00,00 €
A.4 – Dissemination	5.500,00€
A.5 – OERSA	1.638,00 €
B – Total Science Expenditure (sum A.1-A.5)	173.913,00 €
C – FSAC (máx. 15% of B)	26.087,00 €
D – Total Expenditure (B + C)	200.000,00 €



9. SCIENTIFIC PLANNING Action Budget Planning

- <u>Meetings</u>: (i) Core Group meeting, Kedmor Engineers, Tel Aviv, Israel, 31 May 2018 (LOS. A. Kedar); (ii) WG meeting + Workshop, BarcelonaTech, Barcelona, Spain, 27-28 September 2018 (LOS. J. Casas and C. Andrade); (iii) Owners meeting, BAST, Bergisch Gladbach, Germany, 22 November 2018 (LOS. R. Holst and V. Zabel); (iv) MC & WG meeting + Workshop, Minho University, Guimaraes, Portugal, 25-26 March 2019 (LOS. J. Matos, S. Fernandes and J. Amado); and (v) Two dissemination meetings (IABMAS2018; ICCRRR2018).
- <u>Training School</u>: (i) University College Dublin, Dublin, Ireland, 20-22 August 2018. Grant of 450 EUR for 15 trainees from COST countries and reimbursement for 4 trainers (LOS. V. Pakrashi and L. Truong-Hong); (ii) CEDEFOP, Thessaloniki, Greece, 1-4 October 2018. Grant of 450 EUR for 15 trainees from COST countries and reimbursement for 4 trainers (LOS. Y. Xenidis, C. Papadimitriou and P. Panetsos).



9. SCIENTIFIC PLANNING Action Budget Planning

- <u>STSM</u>: Predicted 4 STSMs, in WG4, WG5 and IAB scope, with the first call for applications until the 31st May 2018 (second call for 31 December 2018).
- <u>ITC Conference Grant</u>: Predicted 2 ITC Conference Grants, with the first call for applications until the 28th February 2018 (second call for 31 May 2018).
- <u>Dissemination</u>: (i) web maintenance; (ii) print more 100 brochures & pins (MC members please ask Ms. Lara Leite for brochures & pins); and (iiii) print 100 technical reports w/ 50 pages from WG5 & WG4.
- <u>Standardization Activities</u>: (i) 8 ITC Conference Grants for meetings with CEN and ISO; (ii) Liaison Partner Annual Fee (from OERSA).



Activity	Location	Date	LOS
Training School for Students	Dublin, Ireland	20-22 August 2018	Vikram Pakrashi
	(IR)	(3D)	Lin Truong-Hong





COST ACTION TU1406

SLIDE 81

Activity	Location	Date	LOS
Training School for Inspectors	Thessaloniki, Greece (GR)	1-4 October 2018 (4D)	Yiannis Xenidis Costas Papadimitriou Panagiotis Panetsos





Activity	Location	Date	LOS
WG meeting + Workshop	Barcelona, Spain	27-28 September 2018	Joan Casas
	(SP)	(2D)	Carmen Andrade





Activity	Location	Date	LOS
Integrated WG & MC meeting + Final Conference	Guimarães, Portugal (PT)	25-26 Mar. 2019 (2D)	José Matos Sergio Fernandes Joao Amado





9. UPDATE FROM ACTION CHAIR Dissemination

Activity	Location	Date
IABSE Conference 2019	Guimarães, Portugal	27-29 March 2019
www.iabse.org/guimaraes2019	(PT)	(3D)



SAVE THE DATE 27-29 MARCH 2019

TOWARDS A RESILIENT BUILT ENVIRONMENT RISK AND ASSET MANAGEMENT

27 to 29 March 2019 Vila Flor Cultural Centre, Guimarães, Portugal

Innovative Themes

- 1. Novel Management Tools for the Built Environment
- 2. Lifecycle Quality Control of new and existing Infrastructures
- 3. Advanced Frameworks for a Sustainable Built Environment
- 4. Risk Analysis Procedures, from Theory to Practice
- 5. Future trends in Structural Engineering

www.iabse.org/guimaraes2019 | secretariat@iabse2019.org



IABSE

Special Session of COST TU 1406



COST ACTION TU1406

SLIDE 85

9. UPDATE FROM ACTION CHAIR Dissemination

Call for Abstracts – 24 March 2018 !

... a special fee will be available for COST TU 1406 members



Activity	Location	Date
Dissemination Meeting	Melbourne, Australia	9-13 July 2018
IABMAS 2018 - http://iabmas2018.org/	(AT)	(5D)



9th INTERNATIONAL CONFERENCE ON BRIDGE MAINTENANCE, SAFETY AND MANAGEMENT

Melbourne Convention and Exhibition Centre 9-13 July 2018

Special Session of COST TU 1406



Activity	Location	Date
Dissemination Meeting	Cape Town, South Africa	19-21 Nov. 2018
ICCRRR18 - http://iccrrr.com/	(SA)	(3D)



19-21 NOV 2018 · CAPE TOWN, SOUTH AFRICA

* WELCOME * PROGRAMME * REGISTRATION * COMMITTEES * ACCOMMODATION * SOCIAL PROGRAMME * CONTACT 🛛 🔍



Concrete Repair, Rehabilitation and Retrofitting

Conference themes

Concrete durability Deterioration Science Condition assessment Materials technology Concrete repair technology Rehabilitation and maintenance Retrofitting and strengthening Performance and health monitoring Education, research and specifications

Background

Call for papers

Important deadlines

Sponsorship and exhibition opportunities



- e-BOOK. The Workshop in Wroclaw will be published in an e-BOOK (with ISBN) of our Action, w/ authorized material. Other e-BOOKs will be developed for Workshop in Barcelona and Final Conference in Guimarães, as well as for the Training School in Dublin and Thessaloniki (also recording is planned);
- Journal. There will be one more special issue of an ISI Web of Knowledge international journal (ICE Infrastructure Asset Management), related to COST TU1406 – Quality Control Plans (standardization issues, WG5);
- Other individual participations as dissemination meetings, special session / mini symposium organizations, published documents, etc., even not reimbursed, but related to COST TU 1406, are welcome, and should be communicated to Lara. Please do not forget the dissemination rules of COST.



For the Final Conference in Guimaraes, Portugal, there is the possibility of publishing the Proceedings with a know Publisher company. Therefore, should we:

- 1. Go ahead with this idea? Do we have enough people interested?
- 2. How many books of proceedings should we publish? For how many people?
- 3. Is there any recommendation of publisher company to start speaking with?



10. REQUESTS FROM NEW MEMBERS

NNC countries

We received applications for WG members from NNC (Albania, Lebanon, Libya, Russia). Any support extending this to other countries is appreciated (list: Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Jordan, Moldova, Morocco, the Palestinian Authority, Syria, Tunisia and Ukraine).



11. NON-COST APPLICATIONS

IPC countries

We received several applications from International Partner Countries (IPC) for WG members. Namely, countries from North America (Canada), Central & South America and Asia (China, South Korea and India). Missing more members from Africa (Namibia, Botswana, ...), Central & South America (Panama, Costa Rica, Ecuador, ...), Asia (Malaysia, Indonesia, Sri Lanka, ...), Oceania (New Zealand, ...). Also, some countries may increase the participants number (e.g. USA, Japan, ...). Any support on this issue is welcome.



12. ANY OTHER BUSINESS (AOB)





COST ACTION TU1406

SLIDE 93

CONSTITUTION

- Portugal, 07/06/2017
 - José C. Matos
 - Joan R. Casas
 - Alfred Strauss





<u>AIM</u>

• promote, at a European level, the understanding and advancement of practice on quality control of bridges and structures.





OBJECTIVES

- Improvement of quality of bridges and structures in Europe;
- to promote worldwide cooperation and understanding through the exchange of knowledge and experience in quality control;
- to encourage awareness and responsibility of structural engineers towards the needs of society;
- to encourage actions necessary for progress of quality control in bridges and structures;
- to improve and foster cooperation and understanding between organisations with similar objectives.





ACTIVITIES

- Conferences, on odd years (1st Conference will be held in 2019, and will coincide with the Final Conference of COST TU1406) [open to proposal for 2021];
- Training Schools (open to proposals for 2020);
- E-Newsletter and E-Books of the Conferences;
- Facebook, LinkedIn, YouTube channels (keep those from COST TU 1406).





ORGANIZATION

- General Assembly (corresponding to MC);
- Executive Committee (corresponding to Core Group) (*);
- Advisory Committee (corresponding to IAB and External Advisory Board);
- Audit Committee (corresponding to Core Group) (*);
- National Groups (to be constituted in an independent way).
- (*) Elected for a three year period (limited to two consecutive terms).





EXECUTIVE COMMITTEE

- President: José C. Matos
- Vice-President: Joan Casas
- Secretary: Eleni Chatzi
- Treasurer: Alfred Strauss
- Member: Irina Stipanović
- Member: Rade Hajdin
- Member: Amir Kedar
- Member: Vikram Pakrashi
- Member:

Gudmundur Gudmundsson





AUDIT COMMITTEE

- President: Jan Bień
- Secretary: Sérgio Fernandes
- Rapporteur: Yiannis Xenidis





MEMBERSHIP

- Individual members;
- Institutional members which shall appoint three representatives who may attend meetings of the Association, and participate in the Association's scientific programme of meetings with the same privileges as individual members;
- Young members, with 25 years or less;
- Honorary members;
- Observer members.





MEMBERSHIP YEARLY FEE

- Individual members: 75 EUR
- Institutional members: 300 EUR
- Young Members (≤25 years): 25 EUR
- Honorary Members & Observer Members: No Fee

(*) registration and payment can be made online





WEBSITE

http://eurostruct.org/

EUROSTRUCT



COST ACTION TU1406

SLIDE 103

13. LOCATION AND DATE OF NEXT MEETING

- The next MC meeting will take 1 hour and will be in Guimarães, Portugal, on the 25-03-2019 (17-18h). It will be also the 1st General Assembly of EuroStruct;
- This final conference will run on the 25 & 26 March 2019, and will be the 1st Conference of EuroStruct;
- More information regarding this meeting will be sent by e-mail.



See you in Guimarães!



14. SUMMARY OF MC DECISIONS

- Adoption of Agenda;
- Approval of Last Meeting Minutes;
- Approval of nominations for IAB and External Advisory Board;
- Approval of WBP for the 4rd Grant Period.



15. CLOSING

Thank you for the Support ! Again, I kindly ask you to be active and answer the WG leader requests ... The success of this Action depends on you!



wish you a pleasant stay in Poland ...



15. CLOSING



JOSÉ C. MATOS Civil Engineering Department Minho University 4800-058 Guimarães, Portugal P: +351 253 510 200 F: +351 253 510 217 E: jmatos@civil.uminho.pt

www.tu1406.eu





THANK YOU FOR YOUR ATTENTION!

WWW.TU1406.EU