

**TECHNICAL PROGRAMME**  
of IEEE E-TEMS 2022

**Building bridges toward responsible smart cities**

**9 – 11 March 2022**

**University of the Basque Country, Spain**

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The conference is scheduled in accordance with  
**Central European Time (CET).**

The **IEEE European Technology and Engineering Management Summit (IEEE E-TEMS 2022)** is addressing the challenge of achieving **quality of life in smart cities** through the projects and digital ecosystems. We must find ways to share our ideas, questions and proposals to create a **sustainable** future that bridges the gaps where technologies and **responsible smart cities** meet.

At **IEEE E-TEMS 2022** – hosted by the University of the Basque Country – participants will share their understanding of quality of life within cities, showcase their digital transformation projects and explore related themes.

The programme will be a balance between declared topics and those emergent from other submissions. For those interested in **regional perspectives**, it is important to note that we are actively seeking contributions from organizations in and around Dortmund, Bilbao, Trondheim, Kaunas, Leuven, Kyiv and other Smart Cities.

**IEEE E-TEMS 2021-2025** is a conference series designed to look at critical and emergent issues through the lens of project, technology and engineering management. Over the course of the series, the European Partnership on Project & Innovation Management (EuroPIM) will bring research, practitioner and industry perspectives to emphasize the social accountability that must be associated with project management, digital transformation and smart cities. Each event will aim at delivering a hybrid conference model (with both virtual and in-person) and include international experts, educational workshops, doctoral symposia, poster sessions and dialogues amongst our EuroPIM partners. **IEEE E-TEMS 2022** is the second of the series and we sincerely welcome you to consider the details of this programme, how these insights can affect your research and project activities and how, most especially, you can see yourself contributing to future events.

We look forward to seeing you during the series!

### Chairs & Organising Committee:

- Beverly Pasian
- Jose Ramon Otegi-Olaso
- Carsten Wolff
- Anna Badasian
- Nargiza Mikhridinova
- Alexia Nalewaik
- Ianire Taboada

### Organising Team:

- Abouzar Daneshpajouh
- Aleksandra Galiakhmetova
- Anastasiya Kurylchik
- Areej Aldaghamin
- Carolina Cruz Villazón
- Elena Schröder
- Jon Aretxaga Díaz del Rio
- Jorge Maldonado Carranza
- Jose Ignacio Zuazo Urionabarrenechea
- Iuliia Mende
- Maialen Castaño
- Matthias Smukal
- Mercedes Bayona Moyano
- Olatz Etxaniz Mendiguren
- Rocío Carrillo
- Sabina Eichel

### Programme Committee:

- Bassam Hussein
- Bertha Joseph Ngereja
- Beverly Pasian
- Carsten Wolff
- Chinwi Mgbere
- Christian Reimann
- Christoph Juergenake
- Claudia Doering
- Florian Rademacher
- Galyna Tabunshchik
- Harkaitz Eguiraun
- Holger Timinger
- Iñaki Zuazo
- Jose Ramon Otegi-Olaso
- Kanesan AL Muthusamy
- Luis Ruiz Minguela
- Lydia Kaiser
- Maider Iturrondobeitia
- Markus Schmidtner
- Nigel Williams
- Olatz Etxaniz
- Olena Verenych
- Peter Arras
- Rikardo Minguez
- Rolando Bautista Montesano
- Rūta Čiutienė
- Semih Severengiz
- Sergey Bushuyev

- Thomas Holzmann
- Urtzi Llano
- Uwe Grossmann

### Special Guests:

- Aaron Shenhar
- Afzal Shabaz Mohammed
- Ane Miren Ibañez Zugazaga
- Asier Abaunza Robles
- Bassam Hussein
- Dennie Jansen
- Egle Radvile
- Elena Vitkauskaite
- Federico Perez
- Lydia Kaiser
- Markus Schmidtner
- Nigel Williams
- Peter Arras
- Robert Bierwolf

## SCHEDULE

Time Zone: **Central European Time (CET)**

Time	Wednesday, 09.03.2022	Time	Thursday, 10.03.2022	Time	Friday, 11.03.2022	
09:30-10:00	Opening of the conference	09:30-10:00	Keynote: Expo2020 Dubai Project	09:30-10:30	Keynote: INT - What Makes a City Smart? (It's Not Technology)	
10:00-11:00	Keynote: Bilbao, a Complete Smart City Project	10:30-11:30	Collaborative Smart City Projects	10:30-11:30	Poster & Video Discussions: Achieving Quality of Life in Smart Cities	
11:00-11:20	<i>Virtual guided tour around Bilbao + break</i>	11:30-11:50	<i>Virtual guided tour around Bilbao + break</i>	11:30-11:50	<i>Virtual guided tour around Bilbao + break</i>	
11:20-12:20	Sustainable Smart Cities	11:50-12:50	Workshop: Parameters that influence project management decisions	11:50-12:50	Educational Potential in Smart Cities	
12:20-13:30	<i>Live cooking from Bilbao for our lunchtime</i>	12:50-13:50	<i>Live cooking from Bilbao for our lunchtime</i>	12:50-13:30	<i>Live cooking from Bilbao for our lunchtime</i>	
13:30-14:30	Workshop: Responsible Project Data Analytics	13:50-14:20	Citizens perspective of Bilbao	13:30-14:00	Continuing the Dortmund story	
14:30-15:00	Continuing the Trondheim story	14:20-15:20	Technologies Enabling Quality of Life	14:00-14:30	Continuing the Lithuania story	
15:00-15:30	Continuing the Belgium story			14:30-15:30	New Student Journal: PMRP	
15:30-16:00	<i>Virtual guided tour around Bilbao + break</i>	15:20-15:40	<i>Virtual guided tour around Bilbao + break</i>	15:30-15:40	<i>Virtual guided tour around Bilbao + break</i>	
16:00-17:00	Showcase presentations: Bilbao Smart City	15:40-16:40	Doctoral Workshop: Smart Cities as systems of systems	15:40-16:10	Writing a QoL Research Agenda	
17:00-18:00	Quality of life: Projects from Bilbao and around the world	16:40-17:40	Poster & Video Discussions: Technologies for Responsible Smart Cities	Doctoral Workshop: Smart Cities as systems of systems	16:10-16:30	Panel Discussion "What will this IEEE E-TEMS series be talking about in next 3 years?"
					16:30-17:00	Award session + Closure of the Conference

## FORMAT TYPES OF PAPERS PRESENTATION

### LIVE/ONLINE PRESENTATIONS:

- 2** Digital Sustainability Canvas as an Assessment Tool for Digital Transformation Projects in Education  
(Jorge Maldonado-Carranza, Jose Ramon Otegi-Olaso)
- 29** Extending the Capstone Model for Social Good  
(Louis J Taborda)
- 47** Development of a Holistic Care Platform in the Smart City Environment: Implications for Business Models and Data Usage Concepts  
(Jelena Bleja, Tim Krüger, Sara Neumann, Lars Engelmann, Uwe Grossmann)
- 12** Process Mining in Project Management for Smart Cities  
(Kevin Zebro, Holger Timinger)
- 26** English Language Communication in Agile Cross-Border Projects: Implications on Virtual Learning Settings  
(Ainur Baizhanova, Olha Mikhieieva, Zhibek Tleshova, Carsten Wolff)
- 34** Smart Cities: Through Projects to Resist Entropy  
(Sergey Bushuyev, Natalia Bushuyeva, Svitlana Onyshchenko, Inna Khodikova)
- 53** Teaching Smart City: A Contribution to Advance the Topic of “Smart City” in Academic Education  
(Rebecca Hegemann-Rockel, Thorsten Ruben)
- 15** Artificial Intelligence for Smart Cities: Comparing Latency in Edge and Cloud Computing  
(Ben Naets, Willem Raes, Rembrandt Devillé, Catherine Middag, Nobby Stevens, Ben Minnaert)
- 24** Safety vs Privacy: Findings from a Smart Grid Digitalization Project in Norway  
(Kristian Kanneløning, Arne Roar Nygård, Sokratis Katsikas, Bassam Hussein)
- 36** Transparency in Digital-Citizens Interfaces Through Blockchain Technology: BBBlockchain for Participation Processes in Urban Planning  
(Beatrice Ietto, Kerstin Eisenhut, Robert Muth, Jochen Rabe, Florian Tschorsch)
- 39** How Can Informatics Be Used to Address the Wicked Problem of Urban Mobility System Design?  
(Tristan Stull, Jean-Pierre Kuilboer)
- 11** Multilevel E-portfolio Model in the System of Advanced Training of Academic Staff in Uzbekistan  
(Feruza Saidova, Feruza Zakirova, Azizjon Eminov, Golibjon Otamurodov)
- 37** A General Description of Virtual Power Plants as Smart Manager in Power Systems  
(Jaime Fernando Venegas-Zarama, Jose Ignacio Muñoz-Hernandez)
- 51** Mapping the Platforms in Higher Education – A Systematic Literature Review  
(Finn Reiche)
- 54** Learning and Education in Digital Age: What is an Expectation of the Ukrainian Community?  
(Christian Reimann, Olena Verenysh, Polina Repka)

**POSTERS:**

- 14** A Study for the Application of 'Smart Glass'  
(Asier Divasson Jaureguibarria, Nerea Bilbao Turrado, Nahia Arrese Ugarte)
- 19** Training and Education for Smart Cities, Communities and Enterprises Using ISEM Concept  
(Amjad Umar)
- 22** A Digital Transformation Lab for Developing Countries and Small to Medium Enterprises  
(Amjad Umar)
- 23** Adapting Agile Principles for Requirements Engineering in Automotive Software Development  
(Syeda Komal Anjum, Carsten Wolff, Nerea Toledo)
- 49** The Concept of an Automated Biotechnological Filter for Air Purification  
(Didar Yedilkhan, Alexandr Neftissov, Sanzhar Kusdavletov)
- 57** A Conceptual Model for a Car Sharing System in Kazakhstan  
(Beibut Amirgaliyev, Aigerim Zuyeva, Magzhan Kairanbay, Zharasbek Baishemirov)
- 3** Methods and Tools of Video Monitoring for Remote Laboratory  
(Oleksandr Berezhnoj, Artem Tulenkov, Anzhelika Parkhomenko, Oleksandr Sokolyanskii, Yaroslav Zalyubovskiy, Karsten Henke, Heinz-Dietrich Wuttke)
- 18** Improving Quality of Life Through Engineering Education. A Case Study  
(David Luengo, Albert Treytl, Stephanie Nestawal, Peter Arras, Kinga Korniejenko, Galyna Tabunshchyk, Tom Trigano)
- 20** Cognitive Readiness of Managing Infrastructure Projects Driving by SMARTification  
(Sergey Bushuyev, Natalia Bushuyeva, Denis Bushuiev, Victoria Bushuieva)
- 42** Responsible Decarbonization for Smart Cities: A People-Centered Agenda  
(Yawen Feng, Han-Teng Liao, Mengyi Bu)
- 52** Agile Mindset Competencies for Project Leaders  
(Olha Mikhieieva, Robert Baumgartner, Klaus Stephan, Elena Lipilina)

**VIDEOS (TEASER FORMAT):**

- 25** Scenario-based Requirements Engineering for Complex Smart City Projects  
(Carsten Wiecher, Philipp Tendyra, Carsten Wolff)
- 27** Analysis on User Acceptance for Light Electric Vehicles and Novel Charging Infrastructure  
(Nora Schelte, Semih Severengiz, Sebastian Finke, Jannik Stommel)
- 28** A Distributed Ledger Based Ecosystem as an Approach to Reduce Greenhouse Gas Emissions for Shared Mobility by Incentivizing Users  
(Sebastian Finke, Michele Velenderic, Semih Severengiz, Martin Fortkort, Nora Schelte, Oleg Pankov)
- 38** Well-being as a Composite Capability in the Smart Building Domain: A Formal and Technical Study  
(Khalid Halba, Asmaa Hailane, Ahmed Lbath, Edward Griffor, Anton Dahbura)
- 8** How to Make the Undefined Tangible: Development of a Typology for Smart City Replication  
(Patrick Ruess, Anna Katharina Eberhardt, Svenja Weber)
- 13** The Impact of Grading on Student Motivation and Learning Outcome in Project-Based Learning  
(Bassam Hussein)
- 30** Analysis of Dynamic Resource Allocation in Digital Education Ecosystems  
(Muhammad Anjum Malik, Stephan Recker)
- 40** Angklung Smart Band: An IoT-Based System to Support Music Activities for Elderly in Thailand  
(Saranya Hiranpanthaporn, Pornprapit Phoasavadi, Nagul Cooharajanone)

### WEDNESDAY, 9.03.2022

- 09:30 - 10:00** Opening of the Conference
- 10:00 - 11:00** Keynote: Bilbao, a Complete Smart City Project  
■ Asier Abaunza Robles - Bilbao City Council
- 11:00 - 11:20** Virtual guided tour around Bilbao + break
- 11:20 - 12:20** **Sustainable Smart Cities** (live/online presentations)  
(Chair: Jose Ramon Otegi Olaso)
- 2 Digital Sustainability Canvas as an Assessment Tool for Digital Transformation Projects in Education  
(Jorge Maldonado-Carranza, Jose Ramon Otegi-Olaso)
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  - 47 Development of a Holistic Care Platform in the Smart City Environment: Implications for Business Models and Data Usage Concepts  
(Jelena Bleja, Tim Krüger, Sara Neumann, Lars Engelmann, Uwe Grossmann)
- 12:20 - 13:30** Live cooking from Bilbao for our lunchtime
- 13:30 - 14:30** Workshop: Responsible Project Data Analytics  
■ Nigel Williams
- 14:30 - 15:00** Continuing the Trondheim story  
■ Bassam Hussein
- 15:00 - 15:30** Continuing the Belgium story  
■ Peter Arras and Dennie Jansen
- 15:30 - 16:00** Virtual guided tour around Bilbao + break
- 16:00 - 17:00** Showcase presentations: Bilbao Smart City  
■ Ane Miren Ibañez Zugazaga - BilbaoTIK
- 17:00 - 18:00** Panel Discussion: **Quality of Life: Projects from Bilbao and Around the World**  
■ Beverly Pasian

**THURSDAY, 10.03.2022**

- 09:30 - 10:30** Keynote: Expo2020 Dubai Project  
■ Afzal Shabaz Mohammed - Siemens LLC
- 10:30 - 11:30** **Collaborative Smart City Projects** (live/online presentations)  
(Chair: Luis Ruiz Minguela)
- English Language Communication in Agile Cross-Border Projects: Implications on Virtual Learning Settings  
(Ainur Baizhanova, Olha Mikhieieva, Zhibek Tleshova, Carsten Wolff)
  - Teaching Smart City: A Contribution to Advance the Topic of “Smart City” in Academic Education  
(Rebecca Hegemann-Rockel, Thorsten Ruben)
  - Process Mining in Project Management for Smart Cities  
(Kevin Zebro, Holger Timinger)
  - Smart Cities: Through Projects to Resist Entropy  
(Sergey Bushuyev, Natalia Bushuyeva, Svitlana Onyshchenko, Inna Khodikova)
- 11:30 - 11:50** Virtual guided tour around Bilbao + break
- 11:50 - 12:50** Workshop: **Parameters that Influence Project Management Decisions**  
■ Markus Schmidtner
- 12:50 - 13:50** Live cooking from Bilbao for our lunchtime
- 13:50 - 14:20** **Citizens perspective of Bilbao**  
■ Ane Miren Ibañez Zugazaga
- 14:20 - 15:20** **Technologies Enabling Quality of Life** (live/online presentations)  
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(Chair: Lydia Kaiser)

**16:40 - 17:40****Poster & Video Discussions: Technologies for Responsible Smart Cities**

(Chair: Alexia Nalewaik)

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(Khalid Halba, Asmaa Hailane, Ahmed Lbath, Edward Griffor, Anton Dahbura)



### FRIDAY, 11.03.2022

- 09:30 - 10:30** Keynote: INT - What Makes a City Smart? (It's Not Technology)  
  Aaron Shenhar - Rutgers Business School and Technological Leadership Institute
- 10:30 - 11:30** Poster & Video Discussions: **Achieving Quality of Life in Smart Cities**  
 (Chair: Nigel Williams)
- 3** Methods and Tools of Video Monitoring for Remote Laboratory  
 (Oleksandr Berezhnoj, Artem Tulenkov, Anzhelika Parkhomenko, Oleksandr Sokolyanskii, Yaroslav Zalyubovskiy, Karsten Henke, Heinz-Dietrich Wuttke)
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- 14:30 - 15:30** New Student Journal: PMRP  
■ Beverly Pasian and Nigel Williams
- 15:30 - 15:40** Virtual guided tour around Bilbao + break
- 15:40 - 16:10** Writing a QoL Research Agenda  
■ Beverly Pasian
- 16:10 - 16:30** Panel Discussion: What will this IEEE E-TEMS series be talking about in next 3 years?  
■ Beverly Pasian, Robert Bierwolf, Elena Vitkauskaite
- 16:30 - 17:00** Award session + Closure of the Conference