

HORIZON  
2020

# fASt and Smart charging solutions for full size URban hEavy Duty applications

## Risultati

Informazioni relative al progetto

### ASSURED

ID dell'accordo di sovvenzione: 769850

[Sito web del progetto](#)

### DOI

[10.3030/769850](#)

Progetto chiuso

### Data della firma CE

30 Agosto 2017

### Data di avvio

1 Ottobre 2017

### Data di completamento

31 Marzo 2022

### Finanziato da

SOCIETAL CHALLENGES - Smart, Green And Integrated Transport

### Costo totale

€ 23 401 888,77

### Contributo UE

€ 18 657 433,06

### Coordinato da

VRIJE UNIVERSITEIT BRUSSEL



Belgium

CORDIS fornisce collegamenti ai risultati finali pubblici e alle pubblicazioni dei progetti ORIZZONTE.

I link ai risultati e alle pubblicazioni dei progetti del 7° PQ, così come i link ad alcuni tipi di risultati specifici come dataset e software, sono recuperati dinamicamente da [OpenAIRE](#).

## Risultati finali

[Documents, reports \(22\)](#)



[Pillar 1 Use Case realization report](#)

[Pillar 3 Use Case realization report](#)

[Final KPI evaluation report](#)

[ASSURED Interoperability experience](#)

[ASSURED 1.0 Interoperability reference](#)

ASSURED 10 Interoperability reference

[Clean Bus Report](#)

[Interaction with standardization activities](#)

[Specification of city & and PT stakeholders Strategies and needs](#)

Specification of city and PT stakeholders Strategies and needs

[ASSURED Dissemination Strategy](#)

[ASSURED Dissemination Report](#)

[ASSURED Innovation in Bus Rapid Transit](#)

[Pillar 2 Use Case realization report](#)

[ASSURED Technical Results](#)

[ASSURED Business Cases](#)

[Report on operational load measurements](#)

[Guidelines on Fleet upscale with Electric Buses](#)

[ASSURED Bus Service Functions](#)

[Final requirement compilation and KPI's](#)

Final requirement compilation and KPIs

[Report for upscaling to a fleet of 100 vehicles in Eindhoven](#)

[KPI update and focus on use-cases and demonstrators](#)

KPI update and focus on usecases and demonstrators

[ASSURED use case leaflets](#) 

[ASSURED User Groups Methodology and Report](#) 

## Open Research Data Pilot (1)

[ORDP](#) 

ORDP Open Research Data Pilot

## Websites, patent fillings, videos etc. (4)

[ASSURED Common Brochure - first edition](#) 

ASSURED Common Brochure first edition

[ASSURED Workshops Report](#) 

[ASSURED website](#) 

[ASSURED Common Brochure - final](#) 

ASSURED Common Brochure final

# Publicazioni

## Conference proceedings (12)

[A Framework for Charging Standardisation of Electric Buses in Europe](#) 

**Autori:** Farzam Far, Mehrnaz; Paakkinen, Marko; Cremers, Peter

**Pubblicato in:** Numero 5, 2020

**Editore:** IEEE

**DOI:** 10.1109/VPPC49601.2020.9330894

[Grid Impact Assessment of High Power E-Bus Charging Methods with Seasonal Load Variations](#) 

**Autori:** Daniel Stahleder; David Reihs; Stephan Ledinger; Felix Lehfuss

**Pubblicato in:** Proceedings of TRA2020, the 8th Transport Research Arena: Rethinking transport – towards clean and inclusive mobility, Numero 9, 2020

**Editore:** Finnish Transport and Communications Agency Traficom

**DOI:** 10.5281/zenodo.4292345

[Feasibility study of reconfigurability between different power transmission concepts for electric bus charging](#) 

**Autori:** Pirooz, Ashkan; Heidari Gandoman, Foad; Firouz, Yousef; Van Mierlo, Joeri

**Pubblicato in:** Numero 18, 2020

**Editore:** IEEE

**DOI:** 10.5281/zenodo.6532462

[Thermal Management Strategy of Electric Buses towards ECO Comfort](#) 

**Autori:** Mohammed Mahedi Hasan; Jeroen Maas; Mohamed El Baghdadi; Roel de Groot; Omar Hegazy

**Pubblicato in:** Proceedings of TRA2020, the 8th Transport Research Arena: Rethinking transport – towards clean and inclusive mobility, Numero 8, 2020

**Editore:** Finnish Transport and Communications Agency Traficom

**DOI:** 10.5281/zenodo.4292326

[Electric Bus Forward and Backward Models Validation Methodology Based on Dynamometer Tests Measurements](#) 

**Autori:** López-Ibarra, Jon Ander; Gaztañaga, Haizea; Anttila, Joel; Rahkola, Pekka; Ranta, Mikaela; Pihlatie, Mikko

**Pubblicato in:** Numero 12, 2020

**Editore:** IEEE

**DOI:** 10.1109/VPPC49601.2020.9330924

[Charging Management Strategy using ECO-charging for Electric Bus Fleets in Cities](#) 

**Autori:** Hasan, Mohammed Mahedi; Ranta, Mikaela; El Baghdadi, Mohamed; Hegazy, Omar

**Pubblicato in:** Numero 18, 2020

**Editore:** IEEE

**DOI:** 10.1109/VPPC49601.2020.9330970

[Analysis of the peak grid load reduction using ECO-charging strategy for e-bus fleets in Gothenburg](#) 

**Autori:** Hasan, Mohammed Mahedi; Saez-de-Ibarra, Andoni; El Baghdadi, Mohamed; Hegazy, Omar

**Pubblicato in:** Numero 5, 2022

**Editore:** IEEE

**DOI:** 10.1109/VPPC53923.2021.9699184

[Energy Management Strategy in Electric Buses for Public Transport using ECO-driving](#) 

**Autori:** Hasan, Mohammed Mahedi; El Baghdadi, Mohamed; Hegazy, Omar  
**Pubblicato in:** Numero 2, 2020  
**Editore:** IEEE  
**DOI:** 10.1109/EVER48776.2020.9243130

[Ensuring short-term e-bus compatibility and interoperability within Europe - ASSURED 1.0 interoperability reference](#)

**Autori:** Marko Paakkinen; Peter Cremers; Mehrnaz Farzam Far  
**Pubblicato in:** Proceedings of TRA2020, the 8th Transport Research Arena: Rethinking transport – towards clean and inclusive mobility, Numero 4, 2020  
**Editore:** Finnish Transport and Communications Agency Traficom  
**DOI:** 10.5281/zenodo.4292316

[Energy management and ECO-strategies modeling of electric bus fleets in Barcelona city](#)

**Autori:** Hasan, Mohammed Mahedi; El Baghdadi, Mohamed; Van Mierlo, Joeri; Hegazy, Omar  
**Pubblicato in:** Numero 13, 2021  
**Editore:** IEEE  
**DOI:** 10.5281/zenodo.6532654

[Impact Assessment of High Power Electric Bus Charging on Urban Distribution Grids](#)

**Autori:** Daniel Stahleder, David Reihs, Stephan Leding, Felix Lehfuss  
**Pubblicato in:** IECON 2019 - 45th Annual Conference of the IEEE Industrial Electronics Society, 2019, Pagina/e 4304-4309, ISBN 978-1-7281-4878-6  
**Editore:** IEEE  
**DOI:** 10.1109/IECON.2019.8927526

[Mitigating the impact of high power charging of electric buses: Perspective of European distribution grid operators](#)

**Autori:** Youssef Oualmakran; Laurent De Vroey; Ana Novak-Zdravkovic; Felix Lehfuss; Omar Hegazy  
**Pubblicato in:** Numero 10, 2020  
**Editore:** Electric Drive Transportation Association (EDTA)  
**DOI:** 10.5281/zenodo.4292475

## Peer reviewed articles (7)

[Optimization and Analysis of Electric Vehicle Operation with Fast-Charging Technologies](#)

**Autori:** Al-Saadi, Mohammed; Mathes, Manuel; Käsger, Johannes; Koffie, Robert; Mayrock, Matthias; Van Mierlo, Joeri; Berecibar, Maitane  
**Pubblicato in:** World Electric Vehicle Journal, Numero 13, 2022, ISSN 2032-6653

**Editore:** MDPI

**DOI:** 10.3390/wevj13010020

[Impact on the Power Grid Caused via Ultra-Fast Charging Technologies of the Electric Buses Fleet](#) 

**Autori:** Al-Saadi, Mohammed; Bhattacharyya, Sharmistha; Van Tichelen, Pierre; Mathes, Manuel; Käsge, Johannes; Van Mierlo, Joeri; Berecibar, Maitane

**Pubblicato in:** Energies, Numero 8, 2022, ISSN 1996-1073

**Editore:** Multidisciplinary Digital Publishing Institute (MDPI)

**DOI:** 10.3390/en15041424

[Fast Charging Impact on the Lithium-Ion Batteries' Lifetime and Cost-Effective Battery Sizing in Heavy-Duty Electric Vehicles Applications](#) 

**Autori:** Al-Saadi, Mohammed; Olmos, Josu; Saez-de-Ibarra, Andoni; Van Mierlo, Joeri; Berecibar, Maitane

**Pubblicato in:** Energies, Numero 3, 2022, ISSN 1996-1073

**Editore:** Multidisciplinary Digital Publishing Institute (MDPI)

**DOI:** 10.3390/en15041278

[Multi-Objective Energy Management and Charging Strategy for Electric Bus Fleets in Cities Using Various ECO Strategies](#) 

**Autori:** Hasan, Mohammed Mahedi; Avramis, Nikos; Ranta, Mikaela; Saez-de-Ibarra, Andoni; El Baghdadi, Mohamed; Hegazy, Omar

**Pubblicato in:** Sustainability, Numero 13, 2021, ISSN 2071-1050

**Editore:** MDPI Open Access Publishing

**DOI:** 10.3390/su13147865

[Slow and Fast Charging Solutions for Li-Ion Batteries of Electric Heavy-Duty Vehicles with Fleet Management Strategies](#) 

**Autori:** Al-Saadi, Mohammed; Patkowski, Bartosz; Zaremba, Maciej; Karwat, Agnieszka; Pol, Mateusz; Chełchowski, Łukasz; Van Mierlo, Joeri; Berecibar, Maitane

**Pubblicato in:** Sustainability, Numero 6, 2021, ISSN 2071-1050

**Editore:** MDPI Open Access Publishing

**DOI:** 10.3390/su131910639

[100 kW Three-Phase Wireless Charger for EV: Experimental Validation Adopting Opposition Method](#) 

**Autori:** Colussi, Jacopo; La Ganga, Alessandro; Re, Roberto; Guglielmi, Paolo; Armando, Eric

**Pubblicato in:** Energies, Numero 4, 2021, ISSN 1996-1073

**Editore:** Multidisciplinary Digital Publishing Institute (MDPI)

**DOI:** 10.3390/en14082113

[Heavy-Duty Battery Electric Buses' Integration in Cities Based on Superfast Charging Technologies: Impact on the Urban Life](#) 

**Autori:** Mathes, Manuel; Schmidt, Matthias; Käsgen, Johannes; Fievet, Bruno; Van Tichelen, Pierre; Berecibar, Maitane; Al-Saadi, Mohammed

**Pubblicato in:** Sustainability, Numero 3, 2022, ISSN 2071-1050

**Editore:** MDPI Open Access Publishing

**DOI:** 10.3390/su14084777

## Altri prodotti di ricerca

Altri prodotti di ricerca tramite OpenAire (3)



[Energy management and ECO-strategies modeling of electric bus fleets in Barcelona city](#) 

**Autori:** Hasan, Mohammed Mahedi; El Baghdadi, Mohamed; Van Mierlo, Joeri; Hegazy, Omar

**Pubblicato in:** Zenodo

[Pre-normative technology roadmap and new use cases in electric bus and truck charging](#) 

**Autori:** Farzam Far, Mehrnaz

**Pubblicato in:** Zenodo

[Feasibility study of reconfigurability between different power transmission concepts for electric bus charging](#) 

**Autori:** Pirooz, Ashkan; Heidari Gandoman, Foad; Firouz, Yousef; Van Mierlo, Joeri

**Pubblicato in:** Zenodo

**Ultimo aggiornamento:** 3 Ottobre 2023

**Permalink:** <https://cordis.europa.eu/project/id/769850/results/it>

European Union, 2025

