PUBLIZIERBARER ZWISCHEN- und ENDBERICHT

gilt für Studien aus der Programmlinie Forschung

A) Projektdetails

Titel:	CROSSING BORDERS
Programm:	Leuchttürme Elektromobilität, 4. Ausschreibung E-Mobility's technical beacons – 4th call for proposals
Koordinator / Projekteinreicher:	VERBUND Solutions GmbH
Kontaktperson - Name:	DI Eva Maria Plunger
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Projekt- und Kooperationspartner (inkl. Bundesland):	AIT (Wien, Österreich), E.ON Technology (Deutschland), ZSE (Slowakei), Ecotech (Wien, Österreich), SMATRICS (Wien, Österreich), Fluidtime (Wien, Österreich), IFSTTAR/ENTPE (Frankreich), ovos media (Wien, Österreich), Ubimet (Wien, Österreich), TRAFFIX (Wien, Österreich), Siemens CVC (Wien, Österreich), PDTS (Wien, Österreich); Assoziierter Partner: HUBJECT (Deutschland)
Projektwebsite:	www.crossingborders.cc
Schlagwörter:	E-Mobility, Interoperability, Roaming, Routing, Intermodality, Bonification Systems, Charging Network, international Cooperation, Customer Focus, Demonstration;
Projektgesamtkosten:	5.123.407 €
Fördersumme:	2.234.500 €
Klimafonds-Nr:	KR12EM4K01400
Zuletzt aktualisiert am:	31.08.2016

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B) Projektbeschreibung

Kurzfassung: Max. 1.500 Zeichen inkl. Leerzeichen Sprache: Deutsch	The project CROSSING BORDERS aimed to provide the necessary development efforts and to implement the solutions in a cross-border region large enough to include some of the main population centres of Germany, Austria and Slovakia and some of the most active electric mobility pilot regions (Munich, Salzburg, Vienna, and Bratislava). Based on the perceived limitations of solutions available at the time, the main objectives of CROSSING BORDERS were: • to develop all system components and processes necessary to provide high-quality services to EV drivers in a multi-player, cross-border environment; • to demonstrate these services in an extended, cross-border area in co-operation of multiple partners and to test assumptions made in development; and • to maximize the utilization of project results by connecting to other developments and initiatives in Europe.
Status: Min. ein Aufzählungspunkt, max. 3 Aufzählungspunkte Max. 500 Zeichen inkl. Leerzeichen pro Aufzählungspunkt	Status of implementation: • The project was organised in 7 work packages, implemented each by a sub-set of project partners. All tasks and milestones of the project were implemented in time, during a three-year project phase. • The project results were continuously tested with users: Customer feedback was gathered to be analysed and for further optimization of services deployed. • During the three-year project implementation, a number of dissemination activities were organised to communicate and discuss project results, amongst other an eRoaming expert conference in Vienna, and extensive exchange of results with international e-mobility projects.
Wesentliche (geplante) Erkenntnisse aus dem Projekt: Kurzzusammenfassung der geplanten Erkenntnisse Darstellung der bisherigen Projektergebnisse (sofern vorhanden) Min. ein Aufzählungspunkt, max. 5 Aufzählungspunkte Max. 500 Zeichen inkl. Leerzeichen pro Aufzählungspunkt	The following results were developed and tested in CROSSING BORDERS: • During the project, an automated optimization algorithm for re-charging networks for electric vehicles based on driver use cases and a traffic data model was developed and implemented. Using this algorithm, an overall optimized network plan for the complete project area between Munich and Bratislava has been calculated. For the resulting locations, concrete sites were analysed and selected; • By separating functionalities and system modules within the respective Charge Management Systems of partners and switching from proprietary communication protocols to new,

	open standard protocols, the integration of charging hardware from different manufacturers was achieved; • Business processes between B2B partners (charge point operators, service providers) across organisational and national borders were defined in alignment in European developments. In anticipation of new developments the approach defined in the project proposal (peer-to-peer/bi-lateral roaming) the solution implemented was upgraded to hub-based roaming. Automated data exchange was implemented and tested with roaming platforms Green eMotion (during the lifetime of the project, now defunct), e-clearing.net and Hubject; • An improved algorithm for the calculation of energy efficient routes was developed and implemented based on a longitudinal data model for the energy consumption of electric vehicles taking into account vehicle, road and driver parameter; furthermore, an algorithm for multi-modal routing was re-implemented with the objective to increase speed and efficiency to allow for routing in a larger area, i.e. the CROSSING BORDERS project area instead of a single metropolitan area. The algorithm was further advanced to allow for learning, personalized routing; A smart phone app providing end users with the developed energy-efficient and multi-modal routing solutions was developed; • Interfaces (web and smart phone) and back-end processes to provide customers with real-time information on available charge points and accurate billing information were developed and integrated into service offers.