MEISTER

Mobility **E**nvironmentally-friendly, **I**ntegrated and economically **S**ustainable **T**hrough innovative **E**lectromobility **R**echarging infrastructure and new business models

CIVITAS ECG MEETING
@Urban Mobility Days 2022, Brno

IKEM

22nd September 2022

Katharina Csillak, IKEM

Project Overview

36 months
Duration

September 2018
Starting date

Coordinator
etra I+D

H2020
Topic

Challenge

to **change the paradigm in the electromobility market** by providing **interoperable platforms** and **services** for an **easy, convenient and barrier-free access** to charging, billing and smart grid services, including an increase of the **use of RES** and **self-generation to power EVs.**

MEISTER

Pilot sites

Malaga – Spain

Stockholm – Sweden

Berlin – Germany

6 M€
Budget

730 PMs

4 Countries
11 partners

Spain

Germany

Greece

Sweden

cf. MEISTER Presentation. Project Overview.

Project Objectives

Establishment of innovative sustainable business models for smart mobility	• Reduction of mobility and parking costs (BC1, BC2, and BC4) • Increase in EV demand over time (BC2, BC3, BC4) • Reduction of EVSE installation and operational cost (BC6 and BC10) • Reduction of EV charging prices (BC6)
Deployment of an e-mobility interoperability platform	• Reduction of operational barriers (BC2) • Social acceptance (BC1, BC2, BC3) • Customers registered in the MEISTER platform/app (BC1, BC2, BC4, BC5, and BC6) • Number of integrated services in the MEISTER platform/app (BC5 and BC6)
Integration of e-mobility in the cities' SUMPs and city planning processes	• Reduction of CO_2 emissions (BC1, BC2, BC3, BC4, BC5, and BC6) • Increase in relative offer of EVSE (BC5, BC6, and BC10) • Decrease of private car ownership (BC1 and BC2) • Reduction of parking demand (BC4, BC5, and BC6)
Integration with smart grid services	• Amount of flexibility services tendered by DSOs (BC10)

cf. MEISTER Consortium, "MEISTER Grant Agreement," 2018. AND MEISTER Deliverable 7.1

Business Cases

BC1
E-carsharing as Housing Service

BC2
E-carsharing in the Municipal Fleet in Málaga

BC3
Delivery of Home Care Services with EVs in Stockholm

BC4
City E-logistics Enabling Ultra-low Emissions Hubs in Málaga

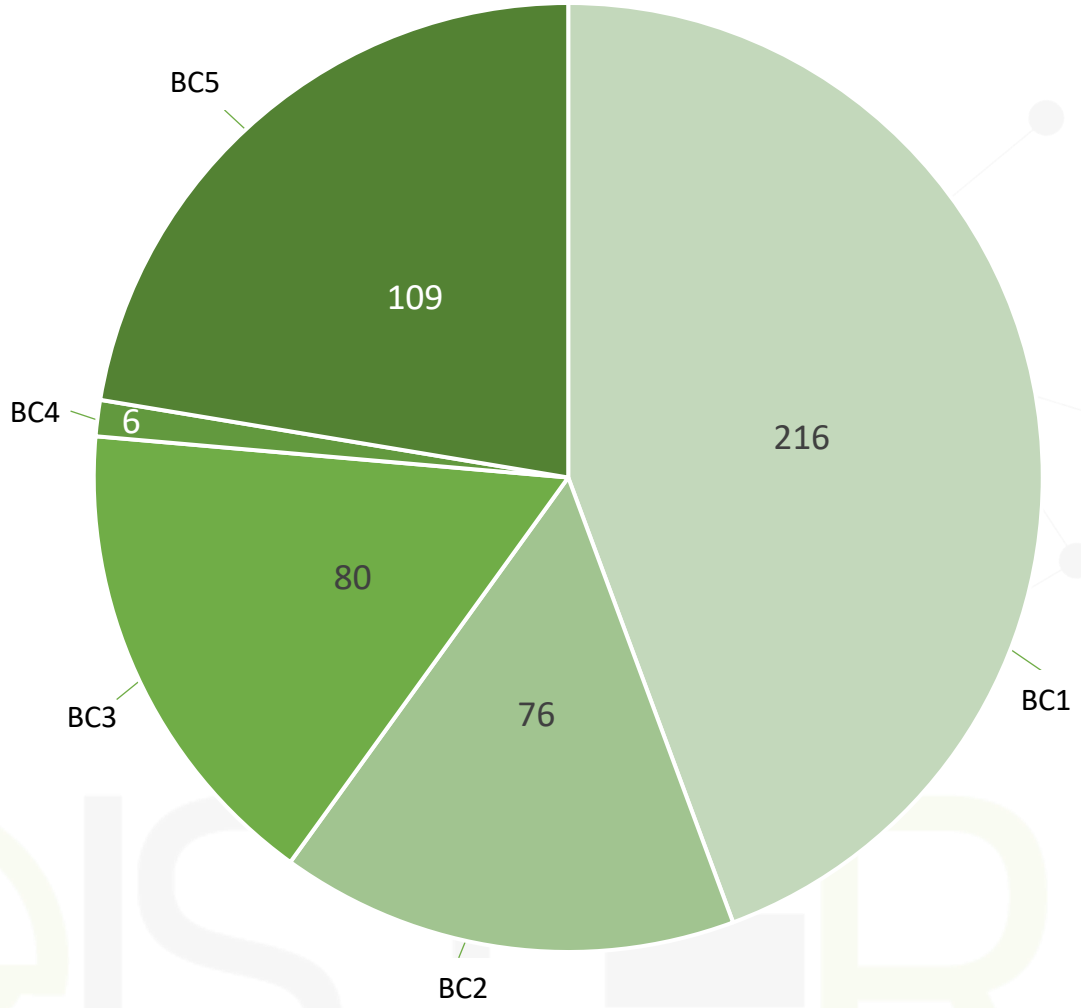
P3. MEISTER Integrated Real-Time Information & Booking Services

BC5
Smart Park and Charge in Berlin

BC6
Smart Park and Charge in Málaga

BC10
Smart Charging in Stockholm

Social Impact Dimension
Customers Registered (for the MEISTER apps)



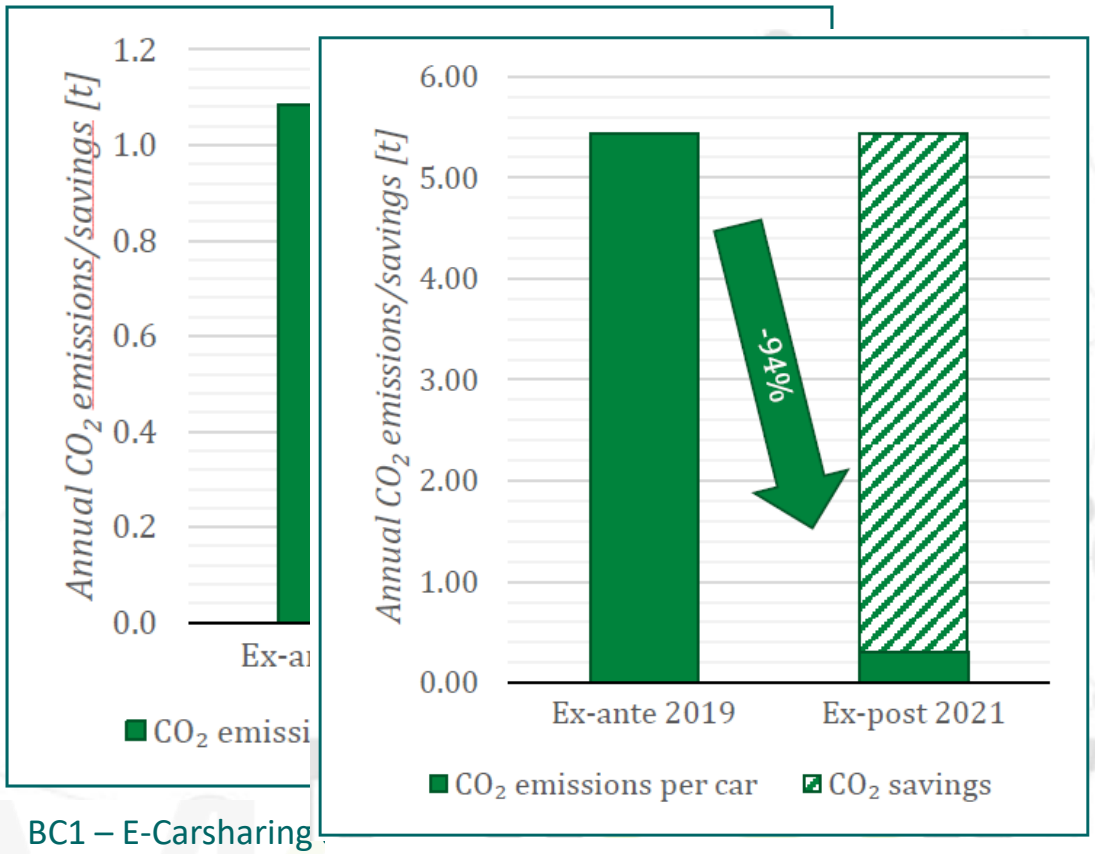
487

additional customers/users due to MEISTER project (without BC6 and BC10)

Source: Data from GEWOBAG, Málaga City Council, City of Stockholm and Platform Provider VMZ/ETRA

Results

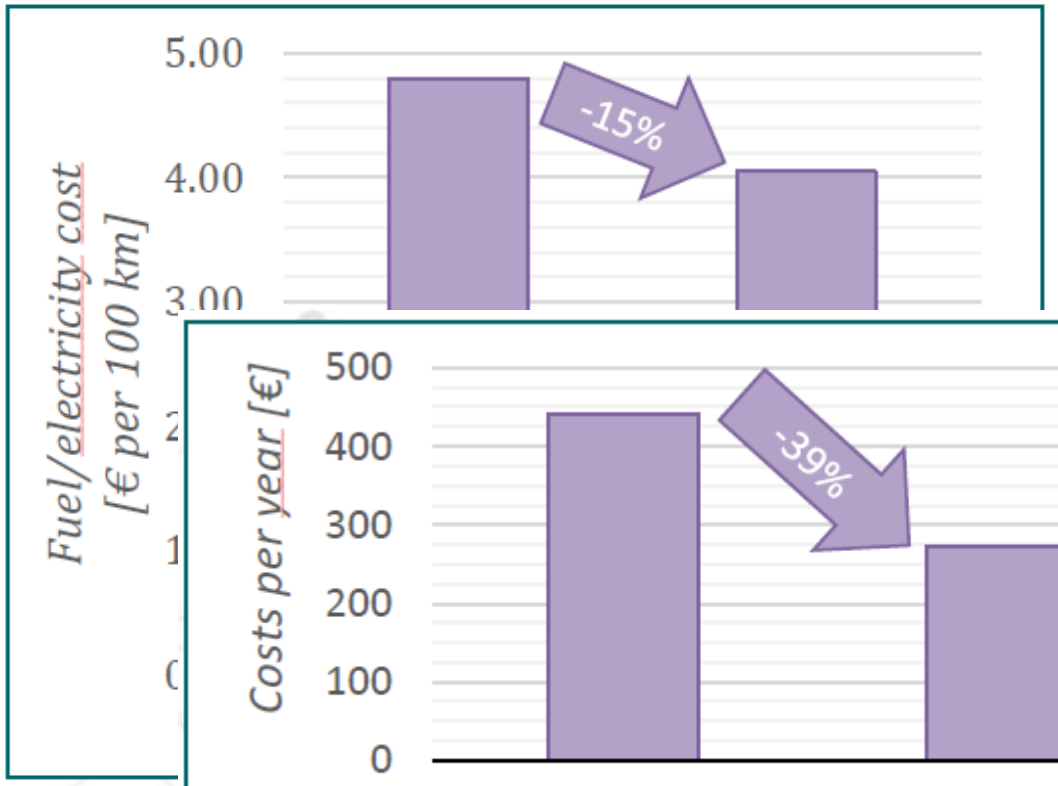
CO2 Emissions



BC1 – E-Carsharing
Total amount of CO
the e-carsharing fle

BC3 Home Care Services for Elderly People (Stockholm):
Total amount of CO2 emissions per vehicle/EV of the home care service fleet per year

Costs



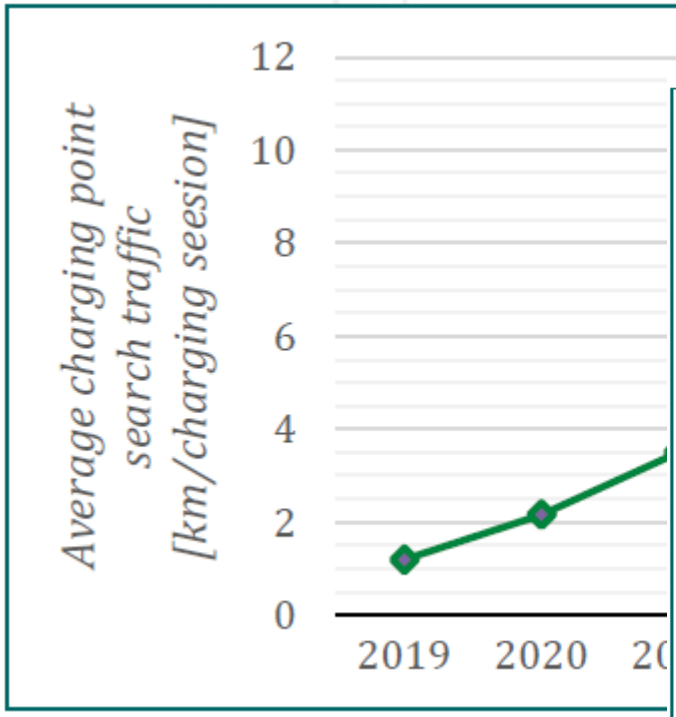
BC2 – E-Ca
Cost of use
and electri

BC4 – City E-logistics Enabling Ultra-low Emissions Hubs (Málaga):
Cost of loading and unloading parking spaces per year

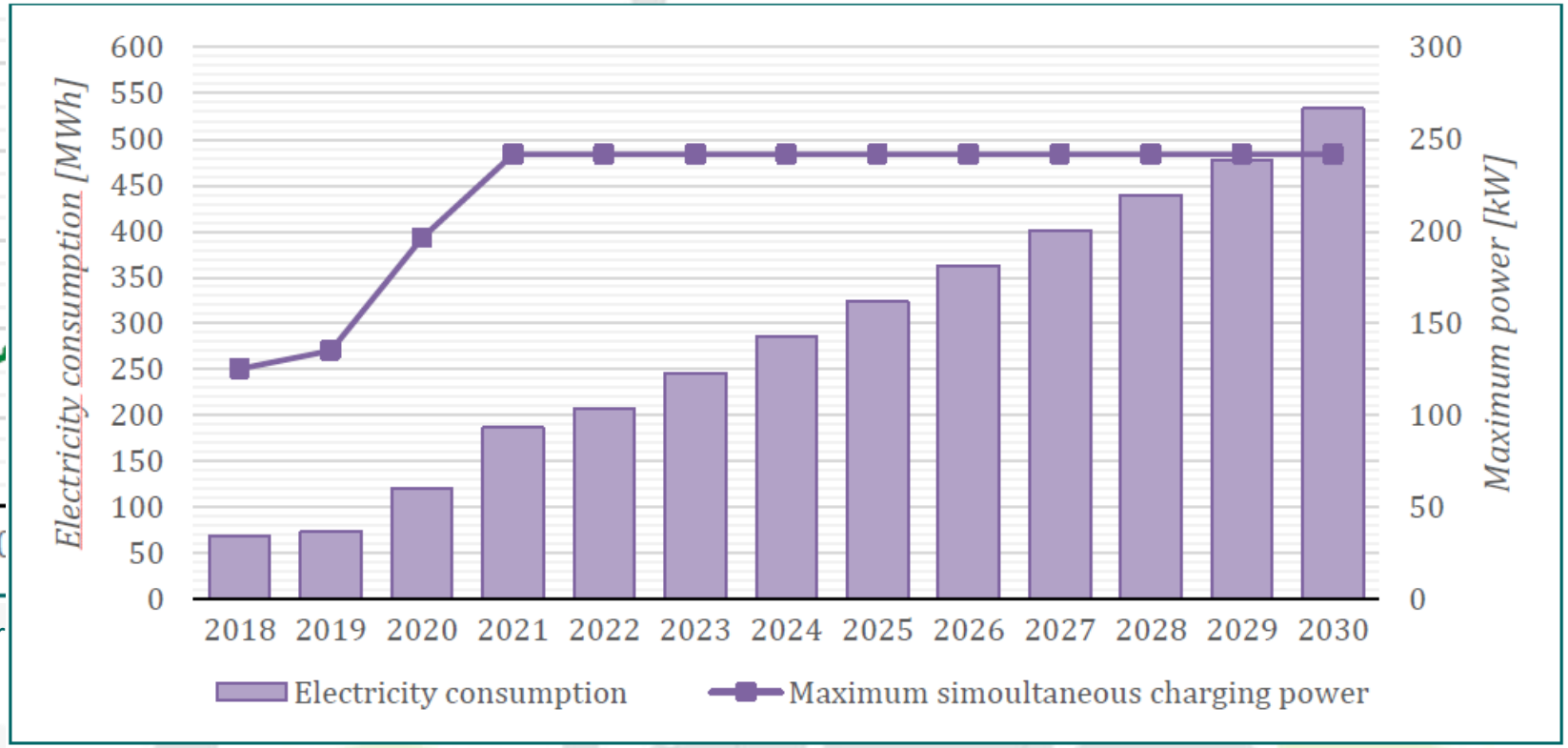
cf. MEISTER D7.2 Cross-site Evaluation and Impact Assessment Report

Results

Business-as-usual scenarios



BC6 (Smart Park and Charge, Málaga): Aver



BC10 (Smart Charging, Stockholm): Change of maximum simultaneous charging power – b-a-u-scenario

cf. MEISTER D7.2 Cross-site Evaluation and Impact Assessment Report

Conclusion and Recommendations

Objectives

Establishment of innovative sustainable business models for smart mobility

- Decrease of mobility and parking costs in BC1, BC2 (E-Carsharing in housing companies/municipal fleet) and BC4 (city e-logistic) compared to the reference scenario
- With the exception of BC3 (home care services), demand for EVs has not been boosted by the BCs
- BM5 (P+C, Berlin) can considerably increase EVSE turnover if used extensively by EVSE users
- BC10 (P+C, Stockholm) can remarkably reduce EVSE OPEX if implemented throughout the city

Deployment of an e-mobility interoperability platform

- Operational barriers have been relatively low, or could have been resolved quickly
- 5 out of the 6 services targeted have been successfully integrated in the MEISTER app
- Among BC1-BC5 approximately 500 customers could be acquired for the MEISTER solutions
- Acceptance vis-à-vis the MEISTER solutions and apps has been relatively high

Cost for mobility using private individual ICEVs will rise continuously and significantly

Further investigating the additional turnover of CPOs generated by Smart Park & Charge

Further developing the integration of MEISTER apps and EVSE or parking spaces

Defining ownership and operation responsibilities of Smart Park & Charge and Smart Charging

Conclusion and Recommendations

Objectives

Integration of e-mobility in the cities' SUMPs and city planning processes

- Huge CO_2 saving potential not fully exploited during the BC demonstration
- If used more extensively by employees and tenants BC1 and BC2 (E-Carsharing in housing companies/municipal fleet) can reduce private car ownership
- BM5 and BC10 (P+C/Smart Charging) can considerably raise relative offer of EVSE if implemented throughout the city
- Reduction of parking demand by BC4 (city e-logistic) and BM5 if adopted thoroughly by commercial and private mobility patterns

Integration with smart grid services

- Amount of flexibility services tendered by DSOs can be increased remarkably by Smart Charging if the BC is implemented throughout the city and refined by iterative re-optimization algorithms

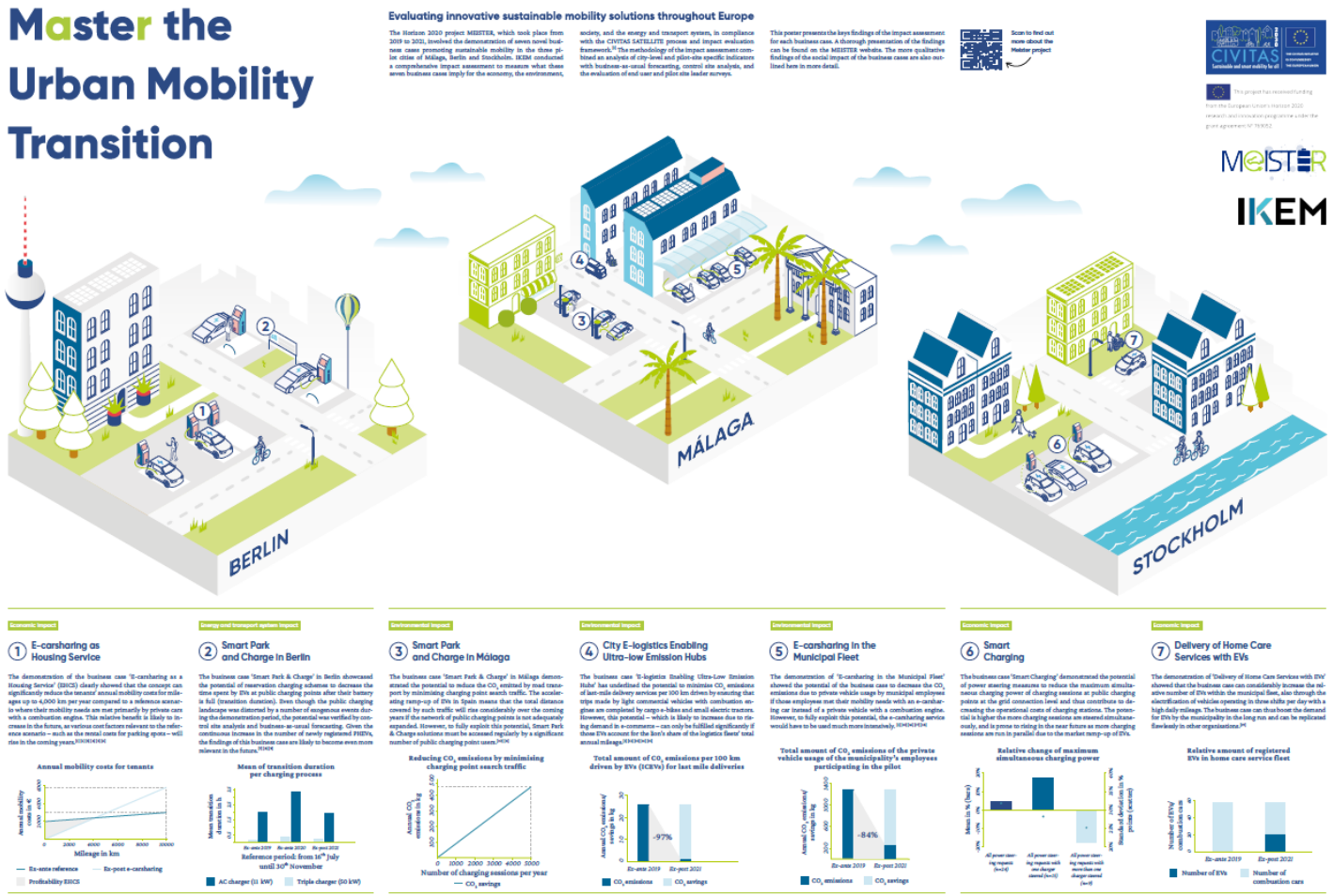
Share mobility and reservation charging schemes require deeper behavior changes

Need to investigate turning points stimulating those changes

Due to the uptake of EVs in dense urban areas Smart Park & Charge and Smart Charging will become more relevant

Summary

Full results available as poster!



As print

or

digital (pdf) at https://meisterproject.eu/poster-meister-results/

Summary

.. or in the Deliverable (D7.2)

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D7.2 Cross-site Evaluation and Impact Assessment Report

https://meisterproject.eu/d7-2-cross-site-evaluation-and-impact-assessment-report/

Outlook

2019 – 2021

Cross Site Evaluation
Impact Assessment
Business Model Validation

IKEM

https://www.userchi.eu/

2020 - 2024

Impact Assessment

IKEM + Moving innovation

exchange

Cross Site Evaluation
Business Model Validation

„Lessons-learned“ from evaluation process of MEISTER influence the work of User-Chi‘s Impact Assessment

THANK YOU!
Any Question?

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For more information visit: https://meisterproject.eu/