ENERGY DATA AND AUTOMATION ARCHITECTURE

DELIVERABLE D3.3

GRANT AGREEMENT	101096614
PROJECT TITLE	Trial Platform foR 5G EvoluTion – Cross-Industry On Large Scale
PROJECT ACRONYM	TARGET-X
PROJECT WEBSITE	www.target-x.eu
PROJECT IDENTIFIER	https://doi.org/10.3030/101096614
PROGRAMME	HORIZON-JU-SNS-2022-STREAM-D-01-01 — SNS Large Scale Trials and Pilots (LST&Ps) with Verticals
PROJECT START	01-01-2023
DURATION	30 Months
DELIVERABLE TYPE	Deliverable
CONTRIBUTING WORK PACKAGES	WP3
DISSEMINATION LEVEL	Public
DUE DATE	M24
ACTUAL SUBMISSION DATE	17.12.2024
RESPONSIBLE ORGANIZATION	RWTH-ACS
EDITOR(S)	Manuel Pitz
VERSION	1.0
STATUS:	Final
SHORT ABSTRACT	This deliverable provides an overview of the running demonstrations for the energy vertical. The demonstration is deployed at the construction, robotics and energy testbed.
KEY WORDS	Energy, 5G, Digital Transformation, Real-Time, Demonstration
CONTRIBUTOR(S)	Manuel Pitz

Disclaimer

Executive Summary

Within the TARGET-X project, the integration of 5G in the energy, construction, manufacturing, and automotive verticals is evaluated. The goal is to identify already available features and possible features for 6G that can benefit these verticals. The energy vertical targets mainly the topics of monitoring, energy awareness and consumption. The developed software and hardware are not only used for grid-specific use cases, but also in other verticals to evaluate the energy consumption of a specific process.

This deliverable provides the Link to the public repository for the software architecture within the energy vertical. The software contains the components needed for Raspberry PI operating system image generation, as well as the backend components that are used for management and visualization of the data acquired by the field devices.

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List of Acronyms and Abbreviations

5G	5th Generation
6G	6th Generation

1 Introduction

Within the TARGET-X project, the 5G energy vertical is strongly focused on monitoring and energy awareness. This is especially important for the low voltage grid, where, until now, monitoring is not too common. Especially with the increase in volatile energy sources which are often deployed in the low voltage grid, a better understanding is key for a stable operation in the future. To achieve this goal, a major component needed is a 5G-enabled software and hardware architecture.

This deliverable provides the link to the publicly available software architecture.

1.1 Relation to other activities

This deliverable describes the software architecture for the energy awareness and grid monitoring use cases. The use cases are run in the energy, robotics and construction testbed, and therefore a strong relation to WP2 (Robotics) and WP5 (Construction) is present.

2 Software Stack

The software is published via the RWTH Gitlab environment. The architecture comprises different software components that are continuously extended. A detailed description of components can be found in Deliverable 3.4 [1].

Repository URL:

https://git.rwth-aachen.de/acs/public/open-energy-data-platform

3 References

[1]   D3.4 Energy Data and Automation Architecture Report