Installation of the digital meter and the dongle

What is Flexity: Flexity is one of the leading Use Cases within the IO.Energy Ecosystem. Flexity investigates which household assets (EVs, boilers...) can be technically operated and which value can be offered to the end-consumer in return. Moreover, Flexity investigates how the digital meter can be used to facilitate the settlement of new services on residential level.

Objective of this note: this note captures the main learnings from the installation of the digital meter and the dongle device within the Flexity use case.

Why install digital meters and dongle devices?

Flexity investigates, amongst others, whether **granular data** (1 second) from the **digital meter** can be used to **verify sub-metered data** from commercial third parties. In order for this to work, Flexity installs dongle devices next to the digital meter to collect this data.

Flexity equipped two real households[1] with a **digital meter + dongle device** during the testing phase.

1. FLexity initially aimed to equip 25% of the participants with a digital meter and dongle device. However, due to the Corona crisis the installations were limited to 2 participants

What did we learn so far?

Flexity aimed to perform a joint installation of both the digital meter and the dongle device, via one dedicated installer that operates across Flanders (cross-region). **A joint installation process** by one mandated installer is, due to small scale of the pilot in addition to a multitude of region-specific contractors, not easily put in place.

When going to a larger **demonstration phase,** Flexity **recommends** to streamline the installation of multiple devices (digital meter, dongle device) in order to guarantee **optimal consumer experience.**

	Digital meter	Dongle device for P1 User-port
Consumer acceptance	• The digital meter is a rather new phenomenon in the Belgian energy market and therefore the knowledge of the participants with respect to the digital meter is limited. Although the required information is available and presented by the installer during the installation of the digital meter, Participants perceive room for improvement with respect to the **clarity in policy w.r.t. net-metering.**[2]	1. In line with regulatory obligations, the end-prosumer needs to open their user-port (P1-port) through the Fluvius customer portal (klantenportaal Fluvius). The portal utilises an automated mandate system which checks whether the applicant for port-activation is mandated to do so. Under normal circumstances the lead-time for port activation is limited from a few seconds to a few hours. *Note: if this is not done upfront, the installer cannot check the functioning of the dongle on-site during installation* 2. Due to the limited scope of the pilot project, Flexity opted for a paper consumer consent document for physical access to the P1-data. • **With respect to further upscaling the pilot project, Flexity recommends a unified digital procedure that captures both steps simultaneously.**
Practical	• N.A.	• **4G connection** is needed[3], since the digital meter is often installed in basements. This requires **reinforcing the signal** during the installation, which can be complex. • Requires **additional power plug** (self-powered variants are becoming available on the market)
Economical	• N.A.	• Dongle devices come with a non-negligible cost (development, installation, communication and data storage costs).

2. Net-metering metering refers to the meter that rolls backward, therefore reducing taxes, tariffs, ... which is beneficial for participants with distributed generation (solar panels,.).
3. Or alternative connections

Conclusion and moving forward

Flexity observed that **a joint installation process** cannot be easily carried out during a small-scale pilot project, however Flexity recommends working with a robust joint installation when going into a **demonstration phase** in order to ensure a positive consumer experience. With respect to the **installation of the dongle**, Flexity noted several **organisational aspects and practicalities,** which must and can be improved. Finally, Flexity observes **potential risks** related to the **substantial installation and communication cost** of such dongle device, for a market segment where the business case is strongly reliant / dependent on **cost efficiency.**

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