Online Forum Re:dy Service

Executive Report

September, 2015

DCMK

Disclaimer

This qualitative study based on an interactive online client panel was conducted by TNS for EDP Distribuição on its position as active partner on the work package 5 of S3C, an European Union FP7 funded project. EDP Comercial developed the Home Energy Management initiative where they tested the tools and guidelines developed by S3C for this effect in the following InovGrid test sites: Lisboa, Évora and Porto.

In the meter Home Energy Management initiative, EDP tested the following guidelines (which were developed in deliverable 4.1 of the S3C project):

- End-user feedback
- Smart appliances
- Monitoring Functionalities

About the s3c project

S3C - Smart Consumer, Smart Customer, Smart Citizen - paves the way for successful long-term end user engagement by acknowledging that one typical smart consumer does not exist and uniform solutions are not applicable when human nature is involved. Beyond acting as a passive consumer of energy, users can take on different positions with respective responsibilities and opportunities. In order to promote cooperation between users and the energy utility of the future, S3C addresses the end user on three roles:

The Smart Consumer is mostly interested in lowering his/her energy bill, having stable or predictable energy bills over time and keeping comfort levels of energy services on an equal level.

The Smart Customer takes up a more active role in future smart grid functioning, e.g. by becoming a producer of energy or a provider of energy services.

The Smart Citizen values the development of smart grids as an opportunity to realize 'we-centred' needs or motivations, e.g. affiliation, self-acceptance or community.

The S3C project (2012-2015) has received funding from the European Union's Seventh Program for research, technological development and demonstration under Grant Agreement No. 308765. For more information on the S3C project, please visit the project website.

Project Objectives and Methodology

Main Project Objectives:

- **To understand clients experience with the re:dy service**:
- **Identify ways to improve re:dy service and generate more interaction with the service**

Methodology:

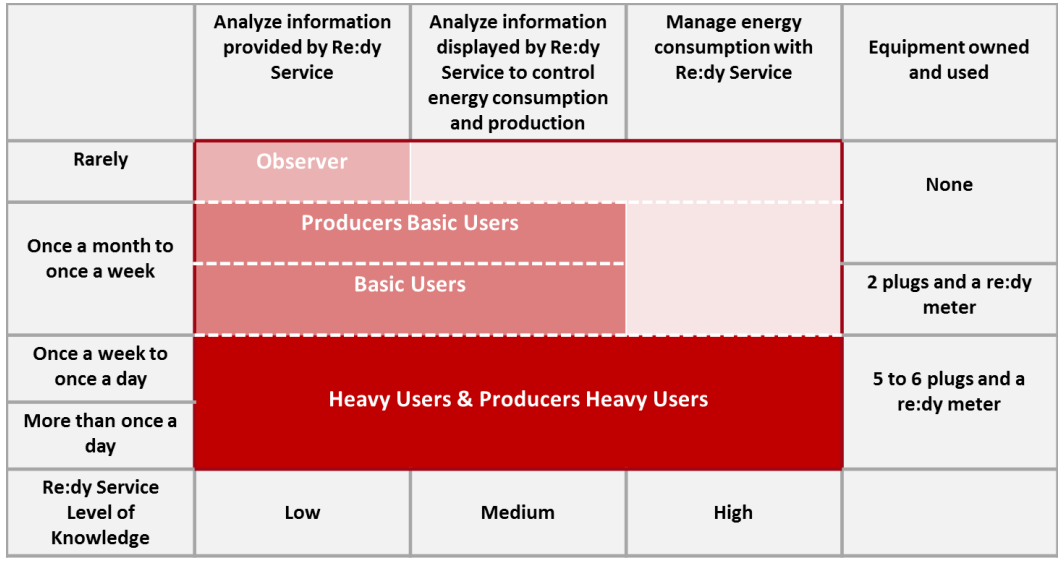
In this context, we conducted an **Online Community** from **22nd of June until the 31st of July** with **16 re:dy service clients**.

Key Findings

Re:dy service evaluation and re:dy users typologies

1. Re:dy Service is perceived as a service that allows to monitor and manage energy consumption at a rational level. At an emotional level, a service that satisfies the need for Relaxation/ Worries Free and Comfort because everything is under control. A reliable and convenient service that allows users to access their real energy consumption, avoiding unexpected surprises regarding energy costs and to monitor, control and optimize the household energy consumption.

2. Based on users level of knowledge of the service, equipment owned and used and the number and type of re:dy service functionalities used, five typologies of users where identified. The majority of interviewees were Heavy Users. These interviewees tend to be younger (on their 40's) and more tech savvy that Basic Users (on their 50's).



Key Findings

Re:dy service evaluation and re:dy users typologies

a) **Heavy Users** tend to be tech-savvy, have a medium or even a high knowledge of the Re:dy Service, tend to be involved with the service, searching for information, exploring the full potential of the service. For them the Re:dy service is a way to control and manage their energy consumption in order to optimize and reduce costs. They tend to access the service frequently through a Smartphone since they value to access real time information at anytime at anywhere. They tend to have five to six plugs and a re:dy meter since their main focus is to control as many appliances as possible. Heavy Users tend to use control and energy efficiency functionalities to optimize their household energy consumption. They are globally satisfied with Re:dy Service as the service meets their expectations, delivering what it promises, generates cost reduction and it's easy to set up and manage.

b) **Basic Users** tend to have a low knowledge of the Re:dy Service, however, they seem eager to learn more about the service and learn from other users experiences. Their main goal is to implement behaviors for greater energy efficiency. Re:dy service is a way for Basic Users to gather information that allows them to implement energy saving measures, manually. They tend to access the service once a month through their laptop since it is a way to access more detailed information. They tend to used a reduce number of functionalities, mainly control functionalities and simulators. Overall, Basic Users tend to be satisfied with Re:dy Service since allows them to lower energy costs. Nevertheless, some interviewees consider that they are not able to use the service' full potential mainly due to their lack of knowledge regarding Re:dy functionalities.

Key Findings

Re:dy service evaluation and re:dy users typologies

c) **Producers Basic Users** tend to have some similarities to the Basic Users typology however they are more focused on controlling energy production as well as energy consumption. They tend to access the service weekly or biweekly mainly through their computer. They tend to have a plug or none since they tend to have low knowledge about the service.

d) **Producers Heavy Users** tends to have some similarities to the Heavy Users typology however these interviewees are also focused on controlling energy production as well as optimize energy consumption. This typology of users are the one that tend access the service more frequently, namely several times a day. Producers Heavy Users are globally satisfied with Re:dy Service, however their expectation is to receive more information about the energy consumption per household division/ room.

e) **Observers Users** tend to have a low knowledge about the Re:dy Service and tend to use the service only to monitor energy consumption. The interaction with the service is almost limited to the monthly analysis of the re:dy report.

Key Findings

Re:dy service evaluation and re:dy users typologies

f) Although the equipment prices tend to be a barrier, the plugs tend to be highly valued and desired as perceptively only with this equipment interviewees can benefit of the service full potential. The Re:dy Meter tends to be only known by heavy users, perceptively this equipment has the same function as the plugs but for built in electric equipment/ household appliances.

1 Plugs

- The greater the number of plugs that the interviewees have, the more electric devices they can control and the more benefits they can obtain from the re:dy service.
- However some limitations were identified:
  - **Price per plug is perceived as too high** to allow interviewees to purchase extra re:dy plugs;
  - **Size** – re:dy plugs have an excessive size for some locations of the house (ex. home appliances close to the wall);
  - **Limited signal** – re:dy plugs lose signal if in a larger distance from the modem.
- And some interviewees also have experienced some problems, specially the difficulty in pairing the plugs (the manual/info that comes with the plugs is perceived by some interviewees as unclear and too technical) .

2 Meter

- For some interviewees the Re:dy Meter isn't really necessary in their home, for other s it's an essential tool to have total control over the household energy consumption.
- However this device is perceived as very expensive and, in this sense, interviewees hesitate or even reject to purchase it.

Key Findings

Evaluation of access devices to re:dy service

3. Smartphones are mainly used by interviewees that tend to access the re:dy service frequently and value the possibility of accessing anytime and from anywhere, mainly Heavy Users and Producers Heavy Users. However, the main challenge of this device is that not all functionalities and tools seem to be present in the re:dy service App thus limiting the interaction with the service.

1 Smartphone

Main advantages:

- Allows them to access re:dy service all most relevant information (ex. consumption and forecast) and functionalities (turn on/off an electric equipment/profile) at anytime from anywhere (they always have their smartphone with tem)

Usage barriers /limitations:

- Not all service functionalities are available on the APP.
    - However as smartphone tends to be the main device that some interviewees use to access the re:dy service they consider that all information and functionalities off the service should be available on the APP.
- Notices aren't available on the APP.
- APP loses login when the internet connection/signal is weaker
- (Producers Heavy Users) Iphone App – doesn't show real time energy production

Key Findings

Evaluation of access devices to re:dy service

3. On the other hand, the laptop tends to be used mainly by Basic Users and Producers Basic Users Typologies since all the functionalities and information are accessible in this device. The tablet as very accessible and easy to use and tends to be used by Heavy Users and Producers Heavy Users since it is a good alternative to a smartphone.

2 Computer

Main advantages:

- All service functionalities and information are accessible in this device (some information and functionalities are only available in this device specially in terms of energy production)
  - Thus, Heavy Users only tend to access re:dy service through this device when they need to configure or change some service functionalities settings – (e.g. program plugs, create a profile, etc…).
  - (For some interviewees) a quicker access and way to interact with re:dy service (vs smartphone and tablet)

Key Findings

Portal Assessment

4. The re:dy service Portal tends to be very well evaluated since it is perceived as a user friendly and intuitive portal with well structured and detailed information.

    a) The Home Screen is perceived as very good starting point as it displays the most relevant information in a direct, appealing and easy to interpret way.

    b) The Active Management Menu and My Consumption – Energy menu is mainly used by Heavy Consumers as these interviewees have a higher knowledge of the service and equipment that allows them to take advantage of these functionalities.

    c) Globally, for interviewees a Help Section would be valued not only to overcome some difficulties and to fully seize the service potential.

Key Findings

Re:dy service functionalities exploration

5. The Forecast functionality is valued due to the possibility of detecting deviations to the normal energy consumption and adopting corrective measures as well as knowing beforehand the value of the electric energy monthly cost.

6. Profiles are perceived as relevant for the majority of interviewees as perceptively they allow users to easily adjust the functioning of the equipment to specific needs. However this interviewees tend not to know how to use it or don't have the equipment to do it. Thus it's only used by a minority of Heavy Users.

7. The presence simulator although useful is perceived as somewhat difficult to program.

8. The functionality comparison of families/households tends to be perceived as a less useful functionality at the moment as it does not seem to be fully operational.

Key Findings

Re:dy service functionalities exploration

9. Power and Tariff Simulator, Schedule re:dy meter plugs operating hours and Take control on the limit of contracted power are Energy efficiency functionalities and tend to be used mainly by Heavy Users and Producers Heavy Users. Basic Users generally aren't aware of these functionalities or know them but don't know how to use them.

Power and Tariff Simulator

- This functionality is perceived as a **way to reduce costs by adjusting power and tariff to users specific energy consumption namely to the differences on energy consumption throughout the year**.
- Aspects to improve:

The parameters for comparison shouldn't only be the last 30 days but the same period in the last year as the weather conditions tend to be more similar.

Schedule re:dy meter plugs operating hours

- The possibility of programing equipment's to operate during the more economic time (off peak hours), according to the biphasic tariff tends to be very valued by interviewees as a way to reduce costs while for instance maintaining the comfort in the household in terms of temperature.
- Nevertheless, some interviewees consider that is not easy to define the schedule of the plugs and on the other hand the turn on/off isn't reliable.
- Aspects to improve:
  - The icon to add or remove a line should be on the end of the list (not near the first row).
  - For this functionality to be more automatized perceptively it would be necessary to ask more information regarding the equipment where the plug is connected and also how is this equipment used/for what purpose and to include a calendar to register diary routines (peaks of usage, rhythms, absences, etc.).

Key Findings

Re:dy service functionalities exploration

10. Although not all users are aware of the different types of alerts/notices that the re:dy service provides, these functionalities are perceived as useful functionalities to draw user' attention to a potential problem and in this sense tend to be valued.

    - In this context, interviewees suggested the introduction of the following improvements in these functionalities.

      - Include a "Help" icon in this section that describes the propose of the alert/notice and explained step by step how to program it;
      - The frequency in which the alerts should be sent should be defined by the user and all alerts should be displayed in the APP.
      - Include additional ways for the user to receive the alert/notice namely a notice in the App and an SMS when the Alert/notice is set as very important/urgent so they can immediately see it and react accordingly.
      - Absence of Production alert: perceptively this notice/alert is only received after 48 hours without production, however the interviewees producers would like to receive a notice/alert when there's no production in hours that generally there should be production (sunny hours);
      - Energy cut off alert: if the it's a general cut off, the notice/alert should include the estimated time for power to be restored.

    - Other notices/alerts suggested as it might indicate a problem were:
      - Peak consumption;
      - Energy consumption above average
      - Change in energy consumption pattern in the lasts 6 months;
      - Electric equipment/home appliance malfunction.
      - Turn on/off a specific equipment/home appliance.

    - And also a information when the reading was register to be billed.

Key Findings

Re:dy service functionalities exploration

11. Regarding new functionalities, Heavy Users tend to suggest functionalities that increase comfort in the household and control over the household electric equipment such as Household Temperature Control and Household Alarm.

12. When confronted with the possibility of re:dy service to learn with users operations (an be more proactive) interviewees tend to value this possibility since this idea is consistent with functionality's already present in the re:dy service. Also, this conveys the idea that the service continues to evolve which can generate more interest and involvement and helps to justify the service monthly fee. The interviewees welcomed the possibility of sharing experiences with other users and, in this context, suggested the idea of having an Online Forum. Perceptively this will help to clarify doubts, to learn with others users experience and to improve how users interact with the re:dy service.

Key Findings

Re:dy service challenges and recommendations

13. The lack of knowledge, although in different levels, tends to be a challenge for all users. In this sense to overcome this challenge it's important to create Video Tutorials, a Live Chat Assistance in the re:dy service portal and mainly for Basic Users and Producers Basic Users, an Online Forum where clients can share experiences and clarify doubts.

14. The lack of plugs is also a challenge for all users. To overcome this challenge mainly among Heavy Users and Producers Heavy Users a re:dy service campaign "Bring a friend to join re:dy service an win a plug…" might be a win-win partnership as Heavy Users can be easily re:dy service advocators, promoting this service among potential clients while winning more equipment that allows them to further interact with the service. On the other hand, the possibility of acquiring plugs and re:dy meter with the cost divided in monthly payments could also be a good idea to increase re:dy service involvement and interaction.

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