



Photographic evidence of purchased equipment - 4th payment claim

Smart sensors and web platform for monitoring UCO collection bins and process

For the pilot case 3.12 “From UCO to biodiesel”, the UCO collection bins were equipped with smart sensors installed under the bins lids to measure the fill level in regular time intervals, to continuously monitor the position of the bin and instantly detect any significant changes in temperature or unauthorized movements.



Smart Sensor on the lid of a UCO bin



Smart Sensors installation on UCO bins

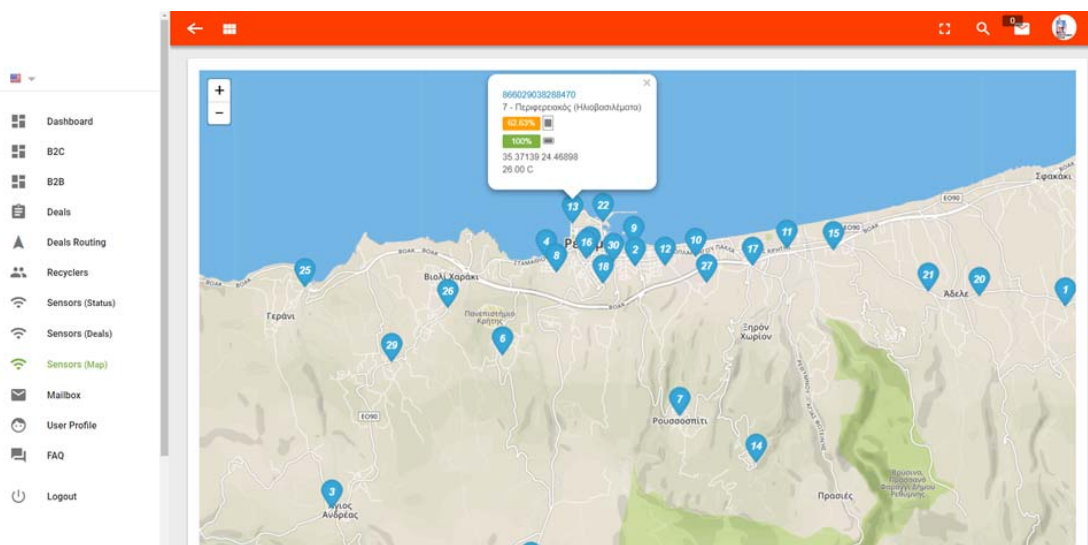


Preparation of UCO bins to be distributed in Rethymno Municipality



Indicative photo of a UCO bin located at Rethymno Municipality

Data recorded by the sensors are transferred wirelessly through GSM, in real time and monitored through the software application. Based on the data collected, the platform shows the fill level of UCO bins and provides the optimum routes for the UCO collector, while the system is capable to send alerts to the administrators in case of leaks detection, temperature rise, battery level of the sensor unauthorised movements or damage.



Smart UCO bins locations monitored through the web platform



IMEI	Sensor Name	Recycler	Fullness	Battery Level	Value	Material
860719027628654	20 - Λούτρα	20 - Λούτρα	80.00%	100%	34	Τηγατέλαιο
865691035514454	15 - Παρκινγκ Συνατσόκη	15 - Παρκινγκ Συνατσόκη	37.27%	100%	81	Τηγατέλαιο
865691035544956	23 - Γωνιά (Αθάνατος Δημαρχείο)	23 - Γωνιά (Αθάνατος Δημαρχείο)	77.27%	40%	37	Τηγατέλαιο
865691033278631	02 - Κουμπές	2 - Κουμπές	80.91%	100%	33	Τηγατέλαιο
865691033279209	26 - Αργυρούπολη	26 - Αργυρούπολη	28.09%	100%	79	Τηγατέλαιο
865691035554781	18 - Γάλλου	18 - Γάλλου	51.82%	100%	65	Τηγατέλαιο
865691035512789	28 - Ρουσοοσιτί	28 - Ρουσοοσιτί	37.27%	100%	81	Τηγατέλαιο
860719026982482	03 - Σαρακίνα (Τέρμα Αποστολάκη)	3 - Σαρακίνα (Τέρμα Αποστολάκη)	61.82%	100%	54	Τηγατέλαιο
865691035512086	01 - Μαρίνα	1 - Μαρίνα	78.18%	100%	36	Τηγατέλαιο
860719027649783	rethimno_10	sensorEpineng_10	78.18%	100%	36	Τηγατέλαιο
865691036066520	13 - Α. Μάχης Κρήτης (Μισίρια)	13 - Α. Μάχης Κρήτης (Μισίρια)	77.27%	100%	37	Τηγατέλαιο
865992034777211	09 - Κολοκοτρώνη (Τέρμα)	9 - Κολοκοτρώνη (Τέρμα)	78.18%	50%	36	Τηγατέλαιο
866029038288470	7 - Περιφερειακός (Ηλιοβασιλέματα)	7 - Περιφερειακός (Ηλιοβασιλέματα)	58.00%	100%	67	Τηγατέλαιο
865691035676741	29 - Χριμωνασάθρι	29 - Χριμωνασάθρι	80.00%	100%	34	Τηγατέλαιο
865691032833840	14 - Πλατανιάς (LIDL)	14 - Πλατανιάς (LIDL)	80.00%	100%	34	Τηγατέλαιο

Smart UCO bins fill level monitored through the web platform



Small Scale biodiesel production unit

The small-scale autonomous production unit demonstrates the local transformation of local collected UCO to biodiesel.



Small scale unit producing biodiesel from Used Cooking Oils



Adding catalyst & methanol to UCO in the machine to produce biodiesel



Removing glycerin from the produced biodiesel



Produced biodiesel in the small scale unit