



## OpenReq - Requirements Intelligence Dashboard Manual v1.0

*This manual provides basic tips how to work with the OpenReq Requirements Intelligence Dashboard environment*

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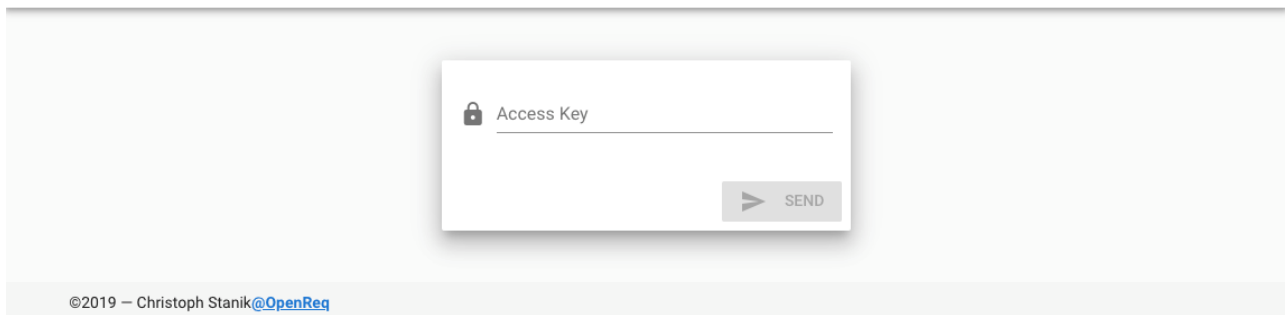
### Introduction

The Requirement Intelligent (RI) dashboard is the main interface used by stakeholders to support their innovation department. The RI dashboard is an automated web-based tool that can identify customer needs in social media.

In the following, a guide through the GUI explaining the functionality implemented for each widget and view is provided.

### Access to the dashboard

Figure 1 shows a screen that requests an access key.



*Figure 1- RI access key*

## Dashboard

The goal of the dashboard view is to give a quick overview of how a company performs with respect to the opinions of its customers. The dashboard is shown in Figure 2.

This view can be separated into three horizontal layers.

The top layer shows the Twitter accounts managed and a heatmap that visualizes when the customers are active. The goal is to understand when customers provide relevant information (such as bug reports and inquiries), when the customer support needs to be more active, and when problems appear.

The layer in the middle shows three distinct trend reports. Each trend report has the goal to show changes in relation to different times in the past – i.e., changes since yesterday, last week, and last month. The outer right trend widget shows the overall sentiment of the customer base. Values above 1.0 mean that customers are writing positive tweets, while values below -1 means that customers are unsatisfied – values between 1 and -1 indicate a neutral sentiment.

The left widget shows the proportions of the number of customers reporting problems, inquiries, or off-topic discussions. On the right, there is a second analysis of the customers' sentiment. This analysis helps visualizing the sentiment over the course of single days. Both widgets on that layer enable the requirements engineer to filter for specific time-frames, such as last 7 days, 30 days, 90 days, this year, all the time, or a custom time frame.

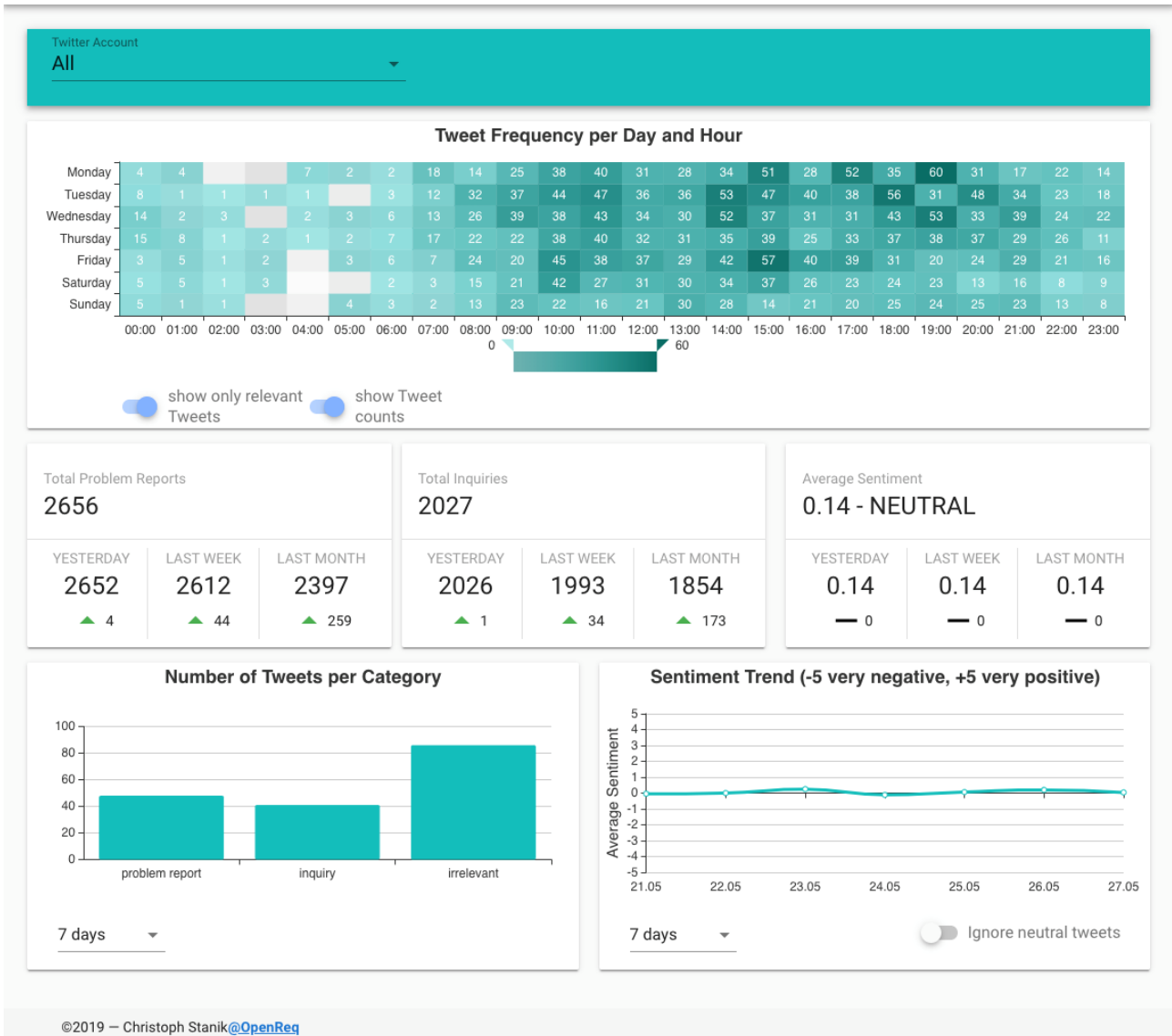


Figure 2 - The RI dashboard

### Focus Views

While the dashboard provides a rather general view on how a company performs, the focus view helps to discover the written feedback. There are two focus views: one on problem reports and one on inquiries. Both focus views look identical; the only differences are the title and the tweets shown.

Figure 3 shows the focus view for problem reports. For each focus view, the RI dashboard provides three horizontal layers.

On the top, there is a filter bar in which the requirements engineer can either select all or a single Twitter account of interest. In addition, a timeframe can be specified to allow filtering tweets for specific releases, days, or custom timeframe.

The middle layer presents a view of predefined topics. The predefined topics are part of the access key configuration. Each topic is represented as a single card containing the name of the topic, the number of tweets belonging to the topic, as well as the overall sentiment of the topic represented as thumbs. For an overall positive sentiment, there is a thumbs up icon, thumbs down for an overall negative perception of the topic and both thumbs up and down if the overall sentiment is neutral.

The bottom shows a table of tweets which allows for discovering tweets with a string search and pagination. Each row contains the date of the tweet, the tweet text and in specific cases two buttons. As this view is about problem reports, it shows the tweets classified as such using the implemented state-of-the-art approaches. As machine learning-based classification approaches do not provide perfect results and sometimes differ from what a human or expert thinks, there are two buttons to either agree or disagree with the classification.

☰ REQUIREMENTS INTELLIGENCE- PROBLEM REPORTS OpenReq

Twitter Account: All

From: \_\_\_\_\_ To: \_\_\_\_\_

### Most Discussed Topics

- Offerta: 434
- Fatturazione: 187
- Problemi: 289
- Churn: 170
- Problemi di Rete: 1557

### Problem Reports

search

Date	Tweet	↑ Label required
18.01.2019	@Winditalia abbiamo fatto segnalazione di guasto ieri mattina e siamo sempre senza linea. Vorrei sapere se avete notizie sulla situazione. Grazie	<input checked="" type="checkbox"/> <input type="checkbox"/>
21.01.2019	@Winditalia Buongiorno, oggi dovevo avere l'attivazione. Non ho pi linea, n col vecchio operatore n con voi...	<input checked="" type="checkbox"/> <input type="checkbox"/>
03.02.2019	@Tre_It ma fatemi capire, da fine dicembre che siamo passati a Iliad e voi che fate? Ancora ci addebitate costi? Ma state scherzando? non mi dite di controllare area clienti perch OVVIAMENTE non abbiamo accesso. La portabilit l'abbiamo fatta da settimane. <a href="https://t.co/44aZlxyFyE">https://t.co/44aZlxyFyE</a>	<input checked="" type="checkbox"/> <input type="checkbox"/>
11.03.2019	@Tre_It dal 26/3 mi addebitate 1 in pi per navigare in rete 4G/LTE. x il mio profilo tariffario fino ad oggi gratuita. la tariffa l'ho fatta ad ottobre '18 e mi sono fatta "infinocchiare" dai Vs. Venditori. ma in un Paese che si sta affacciando al 5G una vergogna @adiconsum <a href="https://t.co/saQU46Z9bg">https://t.co/saQU46Z9bg</a>	<input checked="" type="checkbox"/> <input type="checkbox"/>
12.03.2019	@Winditalia Sto ancora attendendo riscontri, fino ad oggi solo parole. Oggi ho richiesto alla mia banca di rimuovere il RID di pagamento delle vostre future fatture. Cosi quando arriver una fattura mi chiamerete e se il servizio sar decente pagher altrimenti NULLA!!!	<input checked="" type="checkbox"/> <input type="checkbox"/>

Rows per page: 5 96-100 of 2,656

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Figure 3 - Focus View - Problem Reports

## Competitor Comparison

The competitor comparison displays tweet category distribution and sentiment trends by time frame (yesterday, last week, last month, overall).

Figure 4 shows the Competitor comparison view; the RI dashboard provides three horizontal layers.

On the top, there is a filter bar in which the requirements engineer can either select all or a single Twitter account and the predefined topics of interest.

The middle layer presents a view of the sentiment analysis and the number of tweets per category per Twitter accounts. Both widgets on that layer enable the requirements engineer to filter for specific time-frames, such as last 7 days, 30 days, 90 days, this year, all the time, or a custom time frame.

The bottom shows a table of tweets per topic per Twitter account. Each row contains the Twitter account, the number of tweets of last day, last week and last month per topics defined in the filter bar.

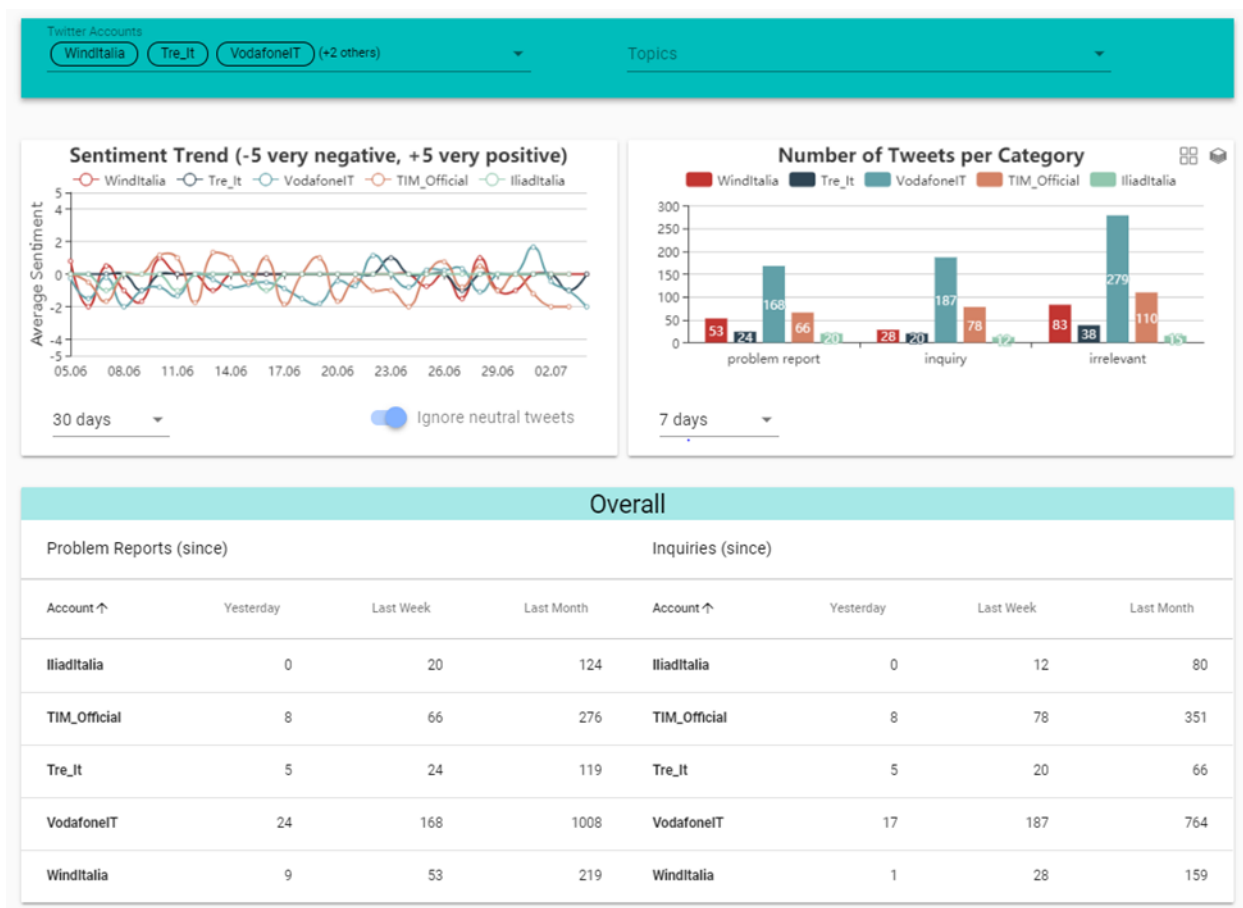



Figure 4 - Competitor Comparison

## Settings

The settings view (see Figure 5) allows adding (or removing) new Twitter accounts by specifying the name of the account, the language the tweets, and the interval specifying how often Tweets are crawled and processed.

The settings view allows changing the Access Key.

☰ REQUIREMENTS INTELLIGENCE- SETTINGS OpenReq 

### Configure Twitter Accounts

Twitter Account\*  Lang\* ▼ Interval\* ▼

Twitter Account	Lang	Interval	Valid	Action
Tre_It	it	2h	✓	<input type="button" value="REMOVE"/>
Winditalia	it	2h	✓	<input type="button" value="REMOVE"/>
VodafoneIT	it	2h	✓	<input type="button" value="REMOVE"/>
IliadItalia	it	2h	✓	<input type="button" value="REMOVE"/>
TIM_Official	it	2h	✓	<input type="button" value="REMOVE"/>

### Change Access Key

current access key: XXX..

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Figure 5 - Settings