Stakeholder Requirements Specification   
(StRS)

Energetics

**Version 1.0 DRAFT**

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**Table of Contents**

[1 Introduction 4](#_Toc30695193)

[1.1 Purpose 4](#_Toc30695194)

[1.2 Scope 4](#_Toc30695195)

[1.2.1 Assumptions 4](#_Toc30695196)

[1 Business Abstract 5](#_Toc30695197)

[1.1 Business Purpose 5](#_Toc30695198)

[1.2 Business Scope 5](#_Toc30695199)

[1.3 Stakeholders 5](#_Toc30695200)

[2 System Abstract 6](#_Toc30695201)

[1.3 System Purpose 6](#_Toc30695202)

[1.4 System Scope 6](#_Toc30695203)

[1.5 System Overview 6](#_Toc30695204)

[1.5.1 System Context 6](#_Toc30695205)

[1.5.2 System Functions 6](#_Toc30695206)

[1.5.3 User Roles and Characteristics 6](#_Toc30695207)

[3 Stakeholder Requirements 8](#_Toc30695208)

[1.6 Attributes 8](#_Toc30695209)

[1.6.1 Types 8](#_Toc30695210)

[1.6.2 Categories 8](#_Toc30695211)

[1.7 Requirements 9](#_Toc30695212)

[Appendix A – Glossary 12](#_Toc30695213)

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Author** | **Revision Description** |
| 02/01/2020 | 1.0 | Alkiviadis Gkouzias | Completion of the version 1.0 document |
|  |  |  |  |
|  |  |  |  |

# Introduction

This section introduces the Stakeholder Requirements Specification (StRS) for **Energetics**. It discusses the purpose, scope and content of the document and provides an overview of the functionality that is addressed by the requirements.

## Purpose

The purpose if this document is to provide the stakeholder requirements for **Energetics** along with a context to help the reader understand them.

## Scope

The document addresses the full scope of the **Energetics** project.

### Assumptions

None

# Business Abstract

This section introduces the **Energetics** project and describes its business context.

## Business Purpose

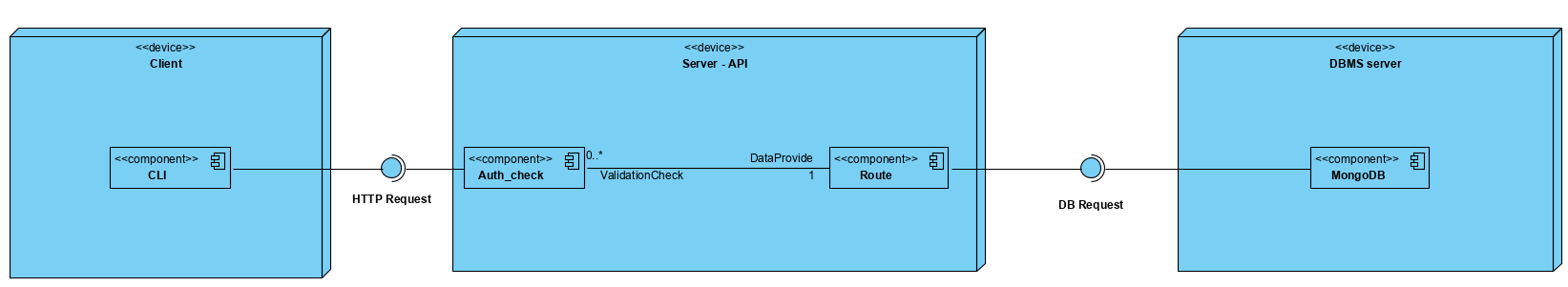
There is a specific need to create an open data and analytics tool for energy consumption. With this tool we will be able to provide free data to our users, allowing them to inspect and compare actual consumption with forecasts, make decisions based on the forecasts and inspect energy generation methods and amount.

The users will be able to group the requested data, using parameters to define filters. They will be able to specify the data format and will have daily quotas to limit their access, for resource control.

The software will be easy to learn and will have a lightweight and easy installation for our users.

## Business Scope

Our system energetics is presented below. The users are going to be able to connect to it, using a **command line interface**. With the command line interface, users will be able to retrieve data from the Database located to our **DMBS server**. The users must be authenticated and have enough daily quota, to be able to make requests to the system. The **server – API** will provide authentication check and interaction with the database, based on the user request.



## Stakeholders

The Stakeholders that are relevant to the **Energetics** requirements are specified in Table 2-1.

**Table 2-1: Stakeholders – Organizations**

|  |  |  |  |
| --- | --- | --- | --- |
| **Organization** | **Type** | **Main Interests** | **Impact of Project** |
| TL19\_35 | Primary | Timely and accurate data analysis to allow individuals to progress toward strategic goals and generate new insights in the energy field. | To obtain accurate information about the consumption, forecast and generation of energy |
| DEDHE | Secondary | Usage of the forecasting ability of Energetics | To obtain accurate information about the consumption, forecast and generation of energy |
| Ministry of Energy | Secondary | Usage of the forecasting ability and the Aggregated Generation data of Energetics | To obtain accurate information about the consumption, forecast and generation of energy |
| Generic Newspaper | Secondary | Usage of the consumption data of Energetics | To obtain accurate information about the consumption of energy |

# System Abstract

This section introduces the **Energetics** project and describes its system context.

## System Purpose

The reasons that led to the development of our system are presented

1. Open data about energy. We wanted to provide open data about energy to our customers but we needed some resource control. We believe that our approach satisfies those needs.
2. A forecasting mechanism about energy. Forecasting can change many things in the energy field. Having a reliable forecasting tool can help in saving energy and providing better resource management as well.

## System Scope

Our project’s name is **Energetics.** It will offer access to open data about energy, on a daily basis, using quota limitations. Organizations like newspaper publishers can be benefited from this data. It will also offer a forecasting tool to provide accurate forecasts about energy consumption to energy providers.

## System Overview

### System Context

The system will provide users with a command line interface. The users will be able to enter queries to the CLI, following some rules. If the users are authenticated and have enough daily quota, the system will provide them with the asked data, if it exists. The system will have error codes to describe errors that may happen.

### System Functions

1. The system must allow users to select the dataset they wish to get data from
2. The system must provide data to users, grouped by date
3. The system must provide data to users, grouped by month
4. The system must provide data to users, grouped by year
5. The system must provide data to users, based on area name
6. The system must provide data to users, based on time resolution [PT15M | PT30M | PT60M]
7. The system must provide a way to administrators, to add users
8. The system must provide a way to administrators, to modify users
9. The system must provide a way to administrators, to check user status
10. The system must provide a way to administrators, to add data to the datasets
11. The system must provide users with a login functionality
12. The system must provide users with a logout functionality
13. The system must enforce quota limitations to non-administrator users

### User Roles and Characteristics

**Table 3-1: User Roles and Characteristics**

|  |  |
| --- | --- |
| **Role** | **Characteristics** |
| Accredited User | Can make requests for energy open data |
| Administrator | Can add new users, modify existing users, check user status and add data to our system |

# Stakeholder Requirements

This section describes how the **Energetics** stakeholder requirements are organized and provides access to the stakeholder requirements via an embedded Microsoft® Excel® object.

## Attributes

This section describes the attributes of the stakeholder requirements utilized for **Energetics**.

### Types

Three types of requirements are identified for **Energetics**, as specified in Table 4-1.

**Table 4-1: Types of Requirements**

|  |  |
| --- | --- |
| **Category** | **Description** |
| Business | Business requirements define the critical activities that a project that must perform to meet the organization's objective(s) while remaining solution independent (i.e., "what the organization wants or needs to be able to do once the project is completed").  Business requirements are included with the stakeholder requirements to provide traceability and to promote a better understanding of the stakeholder requirements by making the associated business requirements more accessible. The business requirements typically come from the project's business case.  Note: It may not be appropriate to include the business requirements with the stakeholder requirements because of various issues, such as availability. However, it is highly recommended that they be included when possible. |
| Business Rule | Criteria or condition that dictates a system’s action or response. |
| Stakeholder | Stakeholder requirements define decisions about business needs, goals, and objectives from the perspective of the stakeholders and their role in the business.  Stakeholder requirements are expected to decompose the business requirements. |

### Categories

Four categories of requirements are identified for **Energetics**, as specified in Table 4-2.

**Table 4-2: Categories of Requirements**

|  |  |
| --- | --- |
| **Category** | **Description** |
| Constraint | Constraints limit the options open to a designer of a solution by imposing immovable boundaries and limits (e.g., the system shall incorporate a legacy system element, or certain data shall be maintained in an online repository). |
| Functional | Functional requirements describe the system functions or tasks to be performed. |
| Non-Functional | Non-functional requirements identify operational or system properties. They define how a system should be. Information Management, Availability, Backup and Recovery, Compatibility, Maintainability, Reliability, Transferability, Performance, Capacity, Scalability, Security, Usability, and User Interface requirements are examples of this type. |
| N/A | Used for Business requirements for purposes of completeness, i.e., to ensure that every requirement traces to a category. (Business requirements are not typically categorized.) |

## Requirements

The **Energetics** stakeholder requirements are maintained in Requirements Verification Traceability Matrix (RVTM) that is embedded in this document. To view the contents of this Microsoft® Excel® workbook, double-click the following icon.

|  |  |  |  |
| --- | --- | --- | --- |
| #REQ | Requirement Text | Stakeholder | Category |
| N1 | Provide data to authenticated users. | TL19\_35 | Functional |
| N2 | Provide administrator tools for the application | TL19\_35 | Functional |
| N3 | Provide forecast data | DEDHE | Functional |
| N4 | Provide a complete set of forecasts and aggegated generation information, while presenting the accuracy of forecast vs actual consumption | Ministry of Energy | Functional |
| N5 | Provide data about actual consumption grouped by specific time periods | Generic newspaper | Functional |

We can map the features to the stakeholder requirements

|  |  |
| --- | --- |
| **ID** | **Maps To** |
| 1 | N1,N2,N4 |
| 2 | N1,N2,N3,N4,N5 |
| 3 | N1,N2,N3,N4,N5 |
| 4 | N1,N2,N3,N4,N5 |
| 5 | N1,N2,N3,N4,N5 |
| 6 | N1,N2,N3,N4,N5 |
| 7 | N2 |
| 8 | N2 |
| 9 | N2 |
| 10 | N2 |
| 11 | N1,N2,N3,N4,N5 |
| 12 | N1,N2,N3,N4,N5 |
| 13 | N1,N3,N4,N5 |

# Appendix A – Glossary

<Define all of the abbreviations (including acronyms) and terms necessary to properly interpret this StRS.>

|  |  |
| --- | --- |
| **Abbreviation** | **Definition** |
| ConOps | Concept of Operations |
| e.g. | exempli gratia ('for the sake of example') |
| i.e. | id est ('that is'; 'in other words'; 'that is to say') |
| IEC | International Electrotechnical Commission |
| IEEE | Institute of Electrical and Electronics Engineers, Inc. |
| Inc. | Incorporated |
| IG | [NARA organization] Program Management Division, Information Services |
| IJ | [NARA organization] IT Project Management Division, Information Services |
| IR | [NARA organization] Requirements Management Division, Information Services |
| ISO | International Organization for Standardization |
| IT | Information Technology |
| MoSCoW | Must, Should, Could, Would (requirements priorities, in order of decreasing importance or desirability) |
| N/A | Not Applicable |
| NARA | National Archives and Records Administration |
| PM | Project Manager |
| POC | Point Of Contact |
| REQ | Requirement |
| RVTM | Requirements Verification Traceability Matrix |
| SDLC | Systems Development Life Cycle |
| StRS | Stakeholder Requirements Specification |
| TBD | To Be Determined |

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Stakeholder | An individual, group, or organization who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. |

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