

# SE 3XA3: Development Plan XPyCharts

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Table 1: **Revision History**

Date	Version	Notes
Date 1	1.0	Notes
Date 2	1.1	Notes

This document describes the requirements for .... The template for the Software Requirements Specification (SRS) is a subset of the Volere template (Robertson and Robertson, 2012). If you make further modifications to the template, you should explicitly state what modifications were made.

## **1 Project Drivers**

### **1.1 The Purpose of the Project**

### **1.2 The Stakeholders**

#### **1.2.1 The Client**

#### **1.2.2 The Customers**

#### **1.2.3 Other Stakeholders**

### **1.3 Mandated Constraints**

### **1.4 Naming Conventions and Terminology**

### **1.5 Relevant Facts and Assumptions**

User characteristics should go under assumptions.

## **2 Functional Requirements**

### **2.1 The Scope of the Work and the Product**

#### **2.1.1 The Context of the Work**

#### **2.1.2 Work Partitioning**

#### **2.1.3 Individual Product Use Cases**

### **2.2 Functional Requirements**

## **3 Non-functional Requirements**

### **3.1 Look and Feel Requirements**

Requirement #: Requirement Type: 10a Event/Use case #:  
**Description:** The graphs produced should be visually appealing and look professional  
**Rationale:** The programmer may be producing graphs for presentations, and will appreciate a good looking product  
**Originator:** Louis Bursey  
**Fit Criterion:** 70% of people surveyed believe that graphs are visually appealing and look professional  
**Customer Satisfaction:** 4 **Customer Dissatisfaction:** 2  
**Priority:** Medium **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

### 3.2 Usability and Humanity Requirements

Requirement #: Requirement Type: 11a Event/Use case #:  
**Description:** The product should be easy to use for novice Python programmers  
**Rationale:** The programmer using this library should be able to focus on their program, not on using this library  
**Originator:** Louis Bursey  
**Fit Criterion:** 80% of programmers familiar with Python successfully use the product  
**Customer Satisfaction:** 4 **Customer Dissatisfaction:** 3  
**Priority:** Medium **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 11b Event/Use case #:  
**Description:** When natural language is required, this product will use English  
**Rationale:** Python is written in English  
**Originator:** Louis Bursey  
**Fit Criterion:** No non-English natural language is used in the product  
**Customer Satisfaction:** 1 **Customer Dissatisfaction:** 5  
**Priority:** High **Conflicts:** None

**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 11c Event/Use case #:  
**Description:** The programmer using this product should quickly be able to learn how to use this product  
**Rationale:** Programmers who face a steep learning curve will be discouraged from using this product  
**Originator:** Louis Bursey  
**Fit Criterion:** Programmers familiar with Python are able to produce graphs within an average twenty minutes of acquiring the library  
**Customer Satisfaction:** 4 **Customer Dissatisfaction:** 4  
**Priority:** Medium **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 11d Event/Use case #:  
**Description:** When used incorrectly, the product should generate error messages that are easy to understand  
**Rationale:** Knowing when and how the library is being used incorrectly will help developers use the library more efficiently.  
**Originator:** Louis Bursey  
**Fit Criterion:** 80% of programmers using the library for the first time can understand the error messages they create  
**Customer Satisfaction:** 5 **Customer Dissatisfaction:** 4  
**Priority:** High **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

### 3.3 Performance Requirements

Requirement #: Requirement Type: 12a Event/Use case #:  
**Description:** The product should generate graphs in a timely manner  
**Rationale:** The program should not take so long that it slows down the programmer's workflow  
**Originator:** Louis Bursey

**Fit Criterion:** The library takes under 20 seconds to generate graphs of a reasonable size  
**Customer Satisfaction:** 4   **Customer Dissatisfaction:** 4  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #:   Requirement Type: 12c   Event/Use case #:  
**Description:** The product should produce accurate graphs  
**Rationale:** Visual representations of data are useless if they don't represent data faithfully  
**Originator:** Louis Bursey  
**Fit Criterion:** Graphs produced should have no less than 20% difference between it and a graph generated by JCharts  
**Customer Satisfaction:** 5   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #:   Requirement Type: 12d   Event/Use case #:  
**Description:** The product should always be available  
**Rationale:** The product cannot unexpectedly go out of service, as programmers will depend on its availability  
**Originator:** Louis Bursey  
**Fit Criterion:** The product is always available  
**Customer Satisfaction:** 1   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #:   Requirement Type: 12e   Event/Use case #:  
**Description:** The library will not stall out, if used incorrectly it will always display error messages and abort  
**Rationale:** Programmers using the library will depend on graphs not stalling out their programs  
**Originator:** Louis Bursey

**Fit Criterion:** Errors in use always create error messages and aborts, not stalls  
**Customer Satisfaction:** 1   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 12f   Event/Use case #:  
**Description:** The library will be able to produce graphs with up to 500 data points  
**Rationale:** Programmers using the library will want to build graphs from large data sets  
**Originator:** Louis Bursey  
**Fit Criterion:** Graph with up to 500 data points can be generated without problems  
**Customer Satisfaction:** 3   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

### 3.4 Operational and Environmental Requirements

Requirement #: Requirement Type: 13a   Event/Use case #:  
**Description:** The product should operate on laptops and desktops  
**Rationale:** Programmers work on laptops and desktops and the library should work in this environment  
**Originator:** Louis Bursey  
**Fit Criterion:** Personal computer users can run programs that use the library  
**Customer Satisfaction:** 3   **Customer Dissatisfaction:** 5  
**Priority:** High   **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016



Requirement #: Requirement Type: 13a Event/Use case #:  
**Description:** The product should be usable as a Python library  
**Rationale:** The Python language is the supported language of this project  
**Originator:** Louis Bursey  
**Fit Criterion:** The product is importable in a Python program  
**Customer Satisfaction:** 1 **Customer Dissatisfaction:** 5  
**Priority:** High **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 13c Event/Use case #:  
**Description:**  
**Rationale:** The product should be distributed as a zip file that is importable in Python programs  
**Originator:** Louis Bursey  
**Fit Criterion:** The product is importable in a Python program  
**Customer Satisfaction:** 3 **Customer Dissatisfaction:** 4  
**Priority:** High **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

Requirement #: Requirement Type: 13d Event/Use case #:  
**Description:** Future releases of the project will be backwards compatible  
**Rationale:** Backwards compatibility keeps programmers from having to update their code when we make changes  
**Originator:** Louis Bursey  
**Fit Criterion:** Releases are backwards compatible  
**Customer Satisfaction:** 2 **Customer Dissatisfaction:** 5  
**Priority:** High **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

### 3.5 Maintainability and Support Requirements

Requirement #: Requirement Type: 13d Event/Use case #:  
**Description:** The product should work in Windows, Linux and Mac OSX environments  
**Rationale:** Programmers working in all of these environments will need graphing capabilities  
**Originator:** Louis Bursey  
**Fit Criterion:** The library is usable in all of these environments  
**Customer Satisfaction:** 4 **Customer Dissatisfaction:** 5  
**Priority:** High **Conflicts:** None  
**Supporting Materials:** None  
**History:** Created October 5, 2016

### 3.6 Security Requirements

There are no security requirements for this project

### 3.7 Cultural Requirements

There are no cultural requirements for this project

### 3.8 Legal Requirements

There are no legal requirements for this project

### 3.9 Health and Safety Requirements

A graphing library does not pose any serious health and safety risks.

## 4 Project Issues

### 4.1 Open Issues

### 4.2 Off-the-Shelf Solutions

### 4.3 New Problems

### 4.4 Tasks

### 4.5 Migration to the New Product

### 4.6 Risks

### 4.7 Costs

### 4.8 User Documentation and Training

### 4.9 Waiting Room

### 4.10 Ideas for Solutions

## References

James Robertson and Suzanne Robertson. *Volere Requirements Specification Template*. Atlantic Systems Guild Limited, 16 edition, 2012.

## 5 Appendix

This section has been added to the Volere template. This is where you can place additional information.

### 5.1 Symbolic Parameters

The definition of the requirements will likely call for `SYMBOLIC_CONSTANTS`. Their values are defined in this section for easy maintenance.