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Project logo

Technical Requirements Specification

for

New Portfolio Venture Management

I4-TRS-PROJECTCODE-YYYYMMDD

Publication Date

# Revision history

*Use the revision history to document the changes included in each new published version. Please replace this* example *revision history with your own.*

|  |  |  |  |
| --- | --- | --- | --- |
| Name | Date | Changes | Version |
| NPVM | 1 Aug 2010 | Initial draft | 0.1 draft |
| NPVM | 14 Sep 2010 | Updated to include Acceptance Requirements and Traceability sections. | 0.2 draft |
| NPVM | 17 Sep 2010 | None. | 1.0 published |
| NPVM | 19 Nov 2010 | Added appendix with section titles in French. | 1.1 published |
| NPVM | 10 Oct 2011 | Updated TRS for 2011 edition (notably removed “plan” elements and simplified “other” requirements) | 2.0 published |
| NPVM | 8/11/2012 | Removed Architecture section (transferred to PVP) | 3.0 published |
| NPVM | 6/11/2013 | Slight reorganisation for 2013 PPE | 4.0 published |
| NPVM | 3/1132014 | Simplification of the document and closer alignment to the CDC. Requirement to include user screenshots removed. | 5.0 published |

# Table of Contents

*The table of contents should preferably fit on a single page for readability and navigability. Playing with the TOC styles can help get it to fit. (This may not however be possible)*

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# Objectif

*Le projet s’inscrit dans le cadre d’accomplissement d’études préalables à la construction d’outils. Plus exactement, il s’agit d’introduire et de développer des stratégies d’investissement que l’on aimerait plus tard implémenter dans un support éventuellement digital.*

*Ces études sont nécessaires du fait que les théories académiques/classiques actuellement disponibles sont essentiellement tournées vers le point de vue d’un investisseur institutionnel et ne permettent pas en conséquence de répondre de manière satisfaisante aux problématiques particulières d’un public non institutionnel.*

*Dans ce projet, les élèves auront ainsi à travailler sur des stratégies d’investissement choisi d’un commun accord avec le partenaire. Plus précisément les tâches vont aller de 1) l’établissement des formules mathématiques sous-jacentes à la stratégie étudiée, 2) de l’implémentation sous R ou Python et enfin 3) de l’analyse des comportements de la stratégie sous divers scénarios réels ou synthétiques d’évolutions de marché.*

*Dans ce document, le lecteur pourra se rendre compte de l’interface graphique, comprendre les différentes stratégies considérées et appréhender les résultats associés à chacune d’elle.*

# Documentation and terminology

## Reference documents

*List all documents directly referred to by this document, as well as additional documents that may be useful to understand the document or place it in a particular context.*

|  |  |  |  |
| --- | --- | --- | --- |
| **Document** | **Number** | **Attached?** | **Application** |
| Document name | Code, number, version | Yes/No | The role of the document relative to this document |

## Glossary

### Terms

*Define all terms used in this document that are unlikely to be familiar to the reader. This should include rare and unusual words, unusual interpretations of common words and domain-specific jargon.*

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Broker | Intermédiaire entre l’investisseur et le marché |

### Acronyms

*Define the meaning of all acronyms and abbreviations used in this document. When the literal meaning of the acronym or abbreviation is not sufficiently clear or precise, provide an additional explanatory text.*

|  |  |  |
| --- | --- | --- |
| **Acronyme** | **Signification** | **Explication** |
| NPVM | New Portfolio Venture Management | Titre du projet |

# Présentation du service

*Le projet que nous réalisons à pour intérêt de proposer différentes stratégies d’investissement sur les produits financiers à des investisseurs particuliers. En effet nous nous sommes rendu compte que les propositions d’investissements actuelles ne sont pas suffisamment orientées vers des investisseurs particuliers pour leur permettre un investissement maîtrisé. L’idée serait donc de guider les investisseurs en fonction de leur aversion au risque pour leur proposer un certain contrôle sur leur finance, étant donné que le secteur financier en terme d’investissement nécessite une prise de risque propre à chaque investisseur.*

*Nous définissons l’investisseur particulier comme un intervenant possédant un capital négligeable face aux institutionnels, et dont les connaissances du secteur financier peuvent être limitées. Son intervention sur les marchés financiers ne peut pas être direct, aussi doit-il passer par un intermédiaire de marché, que l’on appelle un courtier. De ce fait, il existe de nombreux courtiers proposant divers tarifs en fonction des capitaux investis et du profil de risque. A vous de choisir !*

# Exigences fonctionnelles

*Based on external systems and actors that will interact with the system, define the functions that must be provided by the system to each actor, and the scenario of each interaction that must be possible between the system and the external system/actor. External systems and actors include all human interaction roles, external hardware systems and external software systems.*

*Generally, you already have the external actors from the CDC. Here we are “just” going to define a set of functions that the system must provide to satisfy each requirement of each external actor. It can be useful to provide a table showing the user requirement(s) of the CDC that each technical requirement corresponds to, and based on the requirements priority from the CDC, assign a priority to each technical requirement.*

*For user requirements you are encouraged to accompany your scenarios by screenshots / artist sketches of the interaction of the system in an appendix.*

*L’investisseur doit pouvoir acheter ou vendre plusieurs actions et les conserver dans des portefeuilles sans contraintes. Cependant il doit avoir accès à ces services de manière simplifiée. En effet, on considère un investisseur lambda peut aguerrit.*

*L’objectif est donc de guider l’investisseur dans les démarches d’investissement de telle sorte qu’il n’est pas à se soucier des points d’entrées, de sorties, des frais de courtage, frais de garde.*

*Exigences utilisateur :*

|  |
| --- |
| *Suivi évolution* |
| *Valeurs du portefeuille* |
| *Stratégies* |

## Functional perimeter

*Provide a use case diagram showing all system use cases and external actors and systems that this system interacts with. Number your use cases to allow cross-referencing with the subsections that follow. If an alternative formal notation is appropriate for your project, use that instead.*

## Actors

*Define the role of each actor or external system that interacts with the system. Provide formal references to external system specification when/if they exist. A tabular form can be useful.*

### External system A

### Actor B

### Actor C

## Use case 1

*Describe the function as a use case. Include both nominal (basic) and alternative (unusual and exceptional) scenarios. If a use case notation is not appropriate to your project, other formalisms such as data flow diagrams, control flow diagrams, state transition diagrams, etc. may be used. Each function must reference the user requirement(s) of the CDC that it must satisfy. A brief reminder of the expected added-value can be useful in introduction.*

## Use case 2

.

## Use case *n*

.

# Non-functional requirements and constraints

*This section contains all other requirements and constraints that the system must meet, such as performance (accuracy, response time …), social and regulatory, physical, etc. Requirements that can be quantitatively measured should be expressed in numerical terms (for example, “The car must be able to achieve a top speed of 130km/h”). Others such as regulatory constraints must be expressed qualitatively (“The system must conform to the CNIL section 1.4.6 – with a citation of course).*

*Each requirement or constraint should be defined in a separate subsection and clearly reference the user requirement (CDC) that it corresponds to. If appropriate, you may group the technical requirements by the user requirement that they respond to.*

*Some types of nonfunctional requirements that may affect you:*

* **Standards and compatibility requirements** *List any standards that must be met, such as development guidelines to be used in developing the product, and standards or technologies that the product must be compatible with. Include specific versions.*
* **Hardware and software limitations** *Specify limits (speed, volume ..) imposed by hardware and software that this system communicates with. Do not confuse external constraints (such as a slow ERP that you need to communicate with) that constrain the system with chosen hardware performance that must satisfy the constraints.*
* **Compatibility Requirements** *Specify any requirements for backwards compatibility with earlier products, compatibility with existing systems, etc.*
* **Technology/Scientific Constraints***Specify any limitations imposed on or by technologies or research results to be employed.*
* **Physical requirements** *Specify the physical requirements for the product, such as size and weight, or form factor.*
* **Environmental requirements** *Specify the physical environment within which the product must operate or exist, including operational and non-operational temperatures, humidity, shock, etc.*
* **Packaging and labeling requirements** *Specify all product packaging and labeling requirements.”The product lmust be orange”.*
* **Documentation requirements** *Specify any product documentation standards that must be followed and respected, and documents that must accompany the product delivery.*
* **Database requirements** *Describe existing, external database(s) that the system must interact with (data structures, access methods, authentication constraints). This does not include new databases making up part of the system itself. This is sometimes included as a functional requirement.*
* **Operations requirements** *Specify any operator interactions required outside the scope of interacting with the software user interface, such as installing an antenna, cranking the engine ...*
* **Site adaptation requirements** *Specify requirements imposed by the deployment/installation site (such as physical form, attachments, etc).*
* **…**

# Out of scope requirements

*In this section, explicitly list the user requirements of the CDC that will not be satisfied by the prototype. If necessary, provide a justification or an explanation.*

1. Section titles in French

*Please use French section titles if your document is in French.*

1. Object
2. Documents et terminologie
   1. Documents de référence
   2. Terminologie
      1. Termes
      2. Acronymes
3. Présentation du produit
4. Exigences fonctionnelles
   1. Périmètre fonctionnel
   2. Acteurs
      1. Système externe A
      2. Acteur humain B
      3. Acteur humain C
      4. …
   3. Cas d’utilisation 1
   4. Cas d’utilisation 2
   5. …
   6. Cas d’utilisation *n*
5. Exigences non fonctionnelles et contraintes à respecter
   1. …
   2. …
   3. …
6. Exigences non satisfaites