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Research – Investment – Engineering – Re Engineering – Revamping – Dismantling

Ingénierie de Validation - une Force Opérationnelle

FDA – ISPE – QSR – IEEE
x²CSD – x²ECO – FMDS – HSE – SPS – SSV – EMS – EMAS – HFE – GHKG



Annemasse, le 08 Octobre 2007.

Site Master Files - SMFs

Une Démarche Validée, Fiabilisée et Acceptée

cBQP - cBEP - cBIP - cBTP - cBxP - cBVP - cBBP

Plans Directeurs – Plans Opérationnels – Plans Associés – Plans Industriels

Organisation – Mise sous Contrôle – Commissioning – Planning – Coordination – Essais – Actions – Plans
(personnel et confidentiel)

Abstract

On constate aujourd'hui la mise en œuvre de systèmes manufacturiers, façonniers, automatismes et informatiques, hospitaliers, médicaux extrêmement complexes qui sont de plus en plus intégrés aux processus de recherche, de soins, de production, de packaging, de stockage, de distribution et d'utilisation de produits médicaux, biotech, médicamenteux, hospitaliers, prothétiques, cosmétiques, nutritionnels, chimiques et nucléaires, papier, pétrole et gaz. On constate aujourd'hui la mise à disposition de prestations de services de plus en plus liées et intégrées aux processus de recherche, de soins, de production, de packaging, de stockage et de distribution de produits médicaux, biotech, médicamenteux, hospitaliers, prothétiques, cosmétiques, nutritionnels et chimiques, nucléaires, papier, pétrole et gaz. Ces prestations et ces systèmes influent sur la qualité des produits médicaux, biotech, médicamenteux, hospitaliers, prothétiques, cosmétiques, nutritionnels, chimiques et nucléaire, papier, pétrole et gaz; avec la même importance que les hommes, les méthodologies, les procédures, les matières premières, etc. La responsabilité du médecin, du manufacturier, du façonnier, de l'ensemblier, du maître d'œuvre, du maître d'ouvrage, de l'exploitant, de l'industriel est de garantir que ces systèmes et processus fonctionnent conformément aux spécifications et sont utilisés conformément aux procédures. La responsabilité du manufacturier, du façonnier, de l'ensemblier, du maître d'œuvre, du maître d'ouvrage, de l'exploitant, de l'industriel est de garantir que les produits manufacturés, les prestations fournies sont conformes aux spécifications d'utilisation et sont conformes aux spécifications de protection des intervenants, des utilisateurs et des environnements. Les coûts de ces validations et garanties sont extrêmement importants.

L'Ingénierie de Validation apporte les moyens de conduite des projets dans leurs métiers aux chercheur, investisseur, aux ensemblier, maître d'œuvre, maître d'ouvrage et aux médecins, manufacturier, façonnier, exploitant de manière à garantir, par l'invention et l'innovation, la mise sous contrôle, le matricing et le mapping, la maîtrise des projets par les documents opérationnels, l'optimisation des coûts et la maîtrise des processus, intégrant Sûreté, Sécurité, Vulnérabilité, partie des plans directeurs et des plans opérationnels, dans une démarche, rétrospective et prospective, d'organisation, de management, de recherche, d'investissement, de commissioning, de qualification, de validation, qualité et produits, prestations. L'Ingénierie de Validation est le garant de la maîtrise des Cycles de Vie produits, le référentiel à l'établissement des Programmes Directeurs site.

Projet, Maîtrise d'Ouvrage, Maîtrise d'Œuvre, Recherche, Investissement, Mise en Service, Mise en Exploitation, Organisation, Management
 Qualité, Support, Conseil, Avant Vente, Audit, Inspection, Validation, Essai, Maintenance, Formation, Optimisation
 Chimie, Chimie fine, Pharmacie, Biotechnologie, Cosmétique, Nutrition, Santé, Hôpitaux, Nucléaire, Papier, Pétrole, Gaz
 Service, Process, Produit, Ingénierie, Commissioning, Travaux, Chantier, Grand Chantier
 x²ECO Management, x²ECO Project, x²ECO Risks, , x²ECO CSD, x²CSD, FMDS, HSE, SPS, SSV, EMS, EMAS, HFE, GHKG

1 C.1 GENERAL INFORMATION

- C.1.1 Brief information on the firm (including name and address), relation to other sites and, particularly, any information relevant to understand the manufacturing operations.
- C.1.2 Pharmaceutical manufacturing activities as licensed by the Competent Authorities.
- C.1.3 Any other manufacturing activities carried out on the site.
- C.1.4 Name and exact address of the site, including telephone, fax and 24 hrs telephone numbers.
- C.1.5 Type of actual products manufactured on the site (see list at Appendix), and information about specifically toxic or hazardous substances handled, mentioning the way they are manufactured (in dedicated facilities or on a campaign basis).
- C.1.6 Short description of the site (size, location and immediate environment and other manufacturing activities on the site).
- C.1.7. Number of employees engaged in the quality assurance, production, quality control, storage and distribution.
- C.1.8 Use of outside scientific, analytical or other technical assistance in relation to manufacture and analysis (if so, see chapter 7 for details).
- C.1.9 Short description of the quality management system of the firm responsible for manufacture.

2 C.2 CORPORATE, ORGANISATION

- C.2.1 Organisation chart showing the arrangements for sites management.
- C.2.2 Policies.
- C.2.3 Programs.
- C.2.4 Plans.

3 C.3 SITE, ORGANISATION

- C.3.1 Organisation chart showing the arrangements for validation.
- C.3.2 Organisation chart showing the arrangements for engineering.
- C.3.3 Qualifications, experience and responsibilities of key personnel.
- C.3.4 Outline of arrangements for basic and in-service training and how records are maintained.

4 C.4 SITE, MANAGEMENT

- C.4.1 General Staff Management.
- C.4.2 Gap Analysis Management.
- C.4.3 Breakthrough Management.
- C.4.4 Results Management.

5 C.5 REQUIREMENTS

- C.5.1 Safety Requirements.
- C.5.2 FDA Requirements.
- C.5.3 MMA Requirements.
- C.5.4 IEEE Requirements.
- C.5.5 Environment Requirements.

6 C.6 PERSONNEL

- C.6.1 Organisation chart showing the arrangements for quality assurance, including production and quality control. (see also C.1.9.3)
- C.6.2 Qualifications, experience and responsibilities of key personnel.
- C.6.3 Outline of arrangements for basic and in-service training and how records are maintained.
- C.6.4 Health requirements for personnel engaged in production.
- C.6.5 Personnel hygiene requirements, including clothing.

7 C.7 PREMISES, FLOWS, EQUIPMENT, CONFIGURATION**Premises**

C.7.1 Simple plan or description of manufacturing areas with indication of scale (architectural or engineering drawings are not required).

C.7.2 Nature of construction and finishes.

C.7.3 Brief description of HVAC systems. More details should be given for critical areas with potential risks of airborne contamination (schematic drawings of the systems are desirable). Classification of the rooms used for the manufacture of sterile products should be mentioned.

C.7.4 Brief description of controlled atmosphere systems. More details should be given for critical areas with potential risks of airborne contamination (schematic drawings of the systems are desirable). Classification of the rooms used for the manufacture of sterile products should be mentioned.

C.7.5 Brief description of ventilation systems. More details should be given for critical areas with potential risks of airborne contamination (schematic drawings of the systems are desirable). Classification of the rooms used for the manufacture of sterile products should be mentioned.

C.7.6 Special areas for the handling of highly toxic, hazardous and sensitising materials.

C.7.7 Brief description of cleaning systems (schematic drawings of the systems are desirable) including sanitation.

C.7.8 Brief description of water systems (schematic drawings of the systems are desirable) including sanitation.

C.7.9 Maintenance (description of planned preventive maintenance programmes and recording system).

Flows

C.7.10 Brief description of human flows (schematic drawings of the systems are desirable) including sanitation.

C.7.11 Brief description of ingredients flows (schematic drawings of the systems are desirable) including active and non active ingredients.

C.7.12 Brief description of excipients flows (schematic drawings of the systems are desirable) including destruction.

C.7.13 Brief description of products flows (schematic drawings of the systems are desirable) including all ingredients and components and excipients.

Equipment

C.7.14 Brief description of major production and control laboratories equipment (a list of equipment is not required).

C.7.15 Maintenance (description of planned preventative maintenance programmes and recording system).

C.7.16 Brief description of pure media systems (schematic drawings of the systems are desirable) including sanitation.

C.7.17 Brief description of WFI systems (schematic drawings of the systems are desirable) including sanitation.

C.7.18 Brief description of PW systems (schematic drawings of the systems are desirable) including sanitation.

C.7.19 Qualification and calibration, including recording system. Arrangements for computerized systems validation.

Configuration Management

C.7.20 Brief description of major configuration of equipment (a list of equipment is required).

Modification Management

C.7.21 Brief description of major modification of equipment (a list of equipment is required).

Redundancy Management

C.7.22 Brief description of major redundancy of equipment (a list of equipment is required).

8 C.8 CLEANING, SANITATION**Cleaning**

C.8.1 Brief description of CIP systems (schematic drawings of the systems are desirable) including sanitation.

Sanitation

C.8.2 Brief description of CIP systems (schematic drawings of the systems are desirable) including sanitation.

C.8.3 Brief description of SIP systems (schematic drawings of the systems are desirable) including sanitation.

C.8.4 Brief description of products flows (schematic drawings of the systems are desirable) including sanitation.

9 C.9 DOCUMENTATION

C.9.1 Arrangements for the preparation, revision and distribution of necessary documentation for manufacture.

C.9.2 Arrangements for the maintenance of necessary documentation for manufacture.

C.9.3 Arrangements for the masterization of necessary documentation for manufacture.

C.9.4 Arrangements for the management of necessary templates for manufacture.

C.9.5 Any other documentation related to product quality which is not mentioned elsewhere (e.g. microbiological controls on air and water).

10 C.10 DOCUMENTATION, POINT ZERO

C.10.1 Arrangements for the preparation, revision and distribution of "point zero" documentation for manufacture.

- C.10.2 Arrangements for the preparation, revision and distribution of RDMX₀ documentation for manufacture.
- C.10.3 Arrangements for the masterization of necessary documentation for manufacture.
- C.10.4 Any other documentation related to product quality which is not mentioned elsewhere (e.g. microbiological controls on air and water).

11 C.11 PRODUCTION

- C.11.1 Brief description of production operations using, wherever possible, flow sheets and charts specifying important parameters (see at Appendix the list of products manufactured).
- C.11.2 Arrangements for the handling of starting materials. Packaging materials, bulk and finished products, including sampling, quarantine, release and storage.
- C.11.3 Arrangements for reprocessing or rework.
- C.11.4 Arrangements for the handling of rejected materials and products.
- C.11.5 Brief description of general policy for process validation.

12 C.12 CHANGE CONTROL

- C.12.1 Arrangements for Modifications.
- C.12.2 Arrangements for Change Control.

13 C.13 FAILURE MANAGEMENT

- C.13.1 Arrangements for Fault Management.
- C.13.2 Arrangements for Failure Management.

14 C.14 QUALITY CONTROL

- C.14.1 Description of the Quality Control system and of the activities of the Quality Control Department Procedures for the release of finished products.

15 C.15 SITE MANAGEMENT, ASSURANCE SYSTEMS

- C.15.1 Description of the QAS system and of the activities of the Management Staffs.
- C.15.2 Description of the SAS system and of the activities of the Management Staffs.
- C.15.3 Description of the VAS system and of the activities of the Management Staffs.
- C.15.4 Description of the CAS system and of the activities of the Management Staffs.
- C.15.5 Description of the MAS system and of the activities of the Management Staffs.
- C.15.6 Description of the CIAS system and of the activities of the Management Staffs.
- C.15.7 Description of the IAS system and of the activities of the Management Staffs.
- C.15.8 Description of the RiAS system and of the activities of the Management Staffs.
- C.15.9 Description of the ReAS system and of the activities of the Management Staffs.

16 C.16 SITE MANAGEMENT, MASTER PLANS

- C.16.1 Description of the Master Plans Activities.
- C.16.2 Description of the Master Plans and of the activities of the Quality Control Department Procedures for the release of finished products.
- C.16.3 Description of the Connected Master Plans and of the activities of the Quality Control Department Procedures for the release of finished products.
- C.16.4 Description of the Operationnal Plans and of the activities of the Quality Control Department Procedures for the release of finished products.
- C.16.5 Description of the Connected Operationnal Plans and of the activities of the Quality Control Department Procedures for the release of finished products.

17 C.17 VALIDATION MANAGEMENT

- C.17.1 Description of the Validation Control system and of the activities of the Validation Control Department Procedures for the release of finished products.
- C.17.2 Description of the re Validation Control system and of the activities of the Validation Control Department Procedures for the release of finished products.
- C.17.3 Description of the Prospective Validation Control system and of the activities of the Validation Control

Department Procedures for the release of finished products.

C.17.4 Description of the Retrospective Validation Control system and of the activities of the Validation Control Department Procedures for the release of finished products.

C.17.5 Description of the Parallel Validation Control system and of the activities of the Validation Control Department Procedures for the release of finished products.

C.17.6 Description of the Concurrent Validation Control system and of the activities of the Validation Control Department Procedures for the release of finished products.

18 C.18 ENGINEERING

C.18.1 Description of the Engineering Organisation and of the activities of the Engineering Department Procedures for the release of finished products.

C.18.2 Description of the "Travaux Neufs" Organisation and of the activities of the "Travaux Neufs" Department Procedures for the release of finished products.

C.18.3 Description of the "Chantiers" Organisation and of the activities of the "Travaux Neufs" Department Procedures for the release of finished products.

C.18.4 Description of the Commissioning Organisation and of the activities of the "Travaux Neufs" Department Procedures for the release of finished products.

C.18.5 Description of the Inspection Control system and of the activities of the Inspection Control Department Procedures for the release of finished products.

19 C.19 COMMISSIONNING

C.19.1 Description of the Commissioning Organisation and of the activities of the Engineering Department Procedures for the commissioning activities.

C.19.2 Description of the SubContractors Organisation and of the activities of the Engineering Department Procedures for the commissioning activities.

C.19.3 Description of the Artisans Organisation and of the activities of the Engineering Department Procedures for the commissioning activities.

C.19.4 Description of the Allottees Organisation and of the activities of the Engineering Department Procedures for the commissioning activities.

20 C.20 ENGINEERING, DOCUMENTS

C.20.1 Arrangements for the management of the DIO documents.

C.20.2 Arrangements for the management of the DIUO documents.

21 C.21 DESIGN

C.21.1 Description of the URS Specifications Procurement.

C.21.2 Description of the Criteria Specifications.

C.21.3 Description of the Parameters Specifications.

C.21.4 Description of the APS Establishing.

C.21.5 Description of the APD Establishing.

22 C.22 DESIGN, ANALYSIS

C.22.1 Description of the Risks Analysis.

C.22.2 Description of the Informatic Risks Analysis.

C.22.3 Description of the Impact Analysis.

C.22.4 Description of the Valor Analysis.

23 C.23 REDUNDANCIES

C.23.1 Description of the Procédés Redundancies.

C.23.2 Description of the Process Redundancies.

C.23.3 Description of Processus Redundancies.

C.23.4 Description of Informatic Redundancies.

24 C.24 FACTEURS HUMAINS

C.24.1 Facteurs Humains.
C.24.2 Erreurs Humaines.

25 C.25 CONTRACT MANUFACTURE AND ANALYSIS

C.25.1 Description of the way in which the GMP compliance of the contract acceptor is assessed.

26 C.26 DISTRIBUTION, COMPLAINTS AND PRODUCT RECALL

C.26.1 Arrangements and recording system for distribution.
C.26.2 Arrangements for the handling of complaints and product recalls.

27 C.27 SELF INSPECTION

C.27.1 Short description of the self inspection system.
(See also para 1.9.4.)

28 C.28 TRAINING

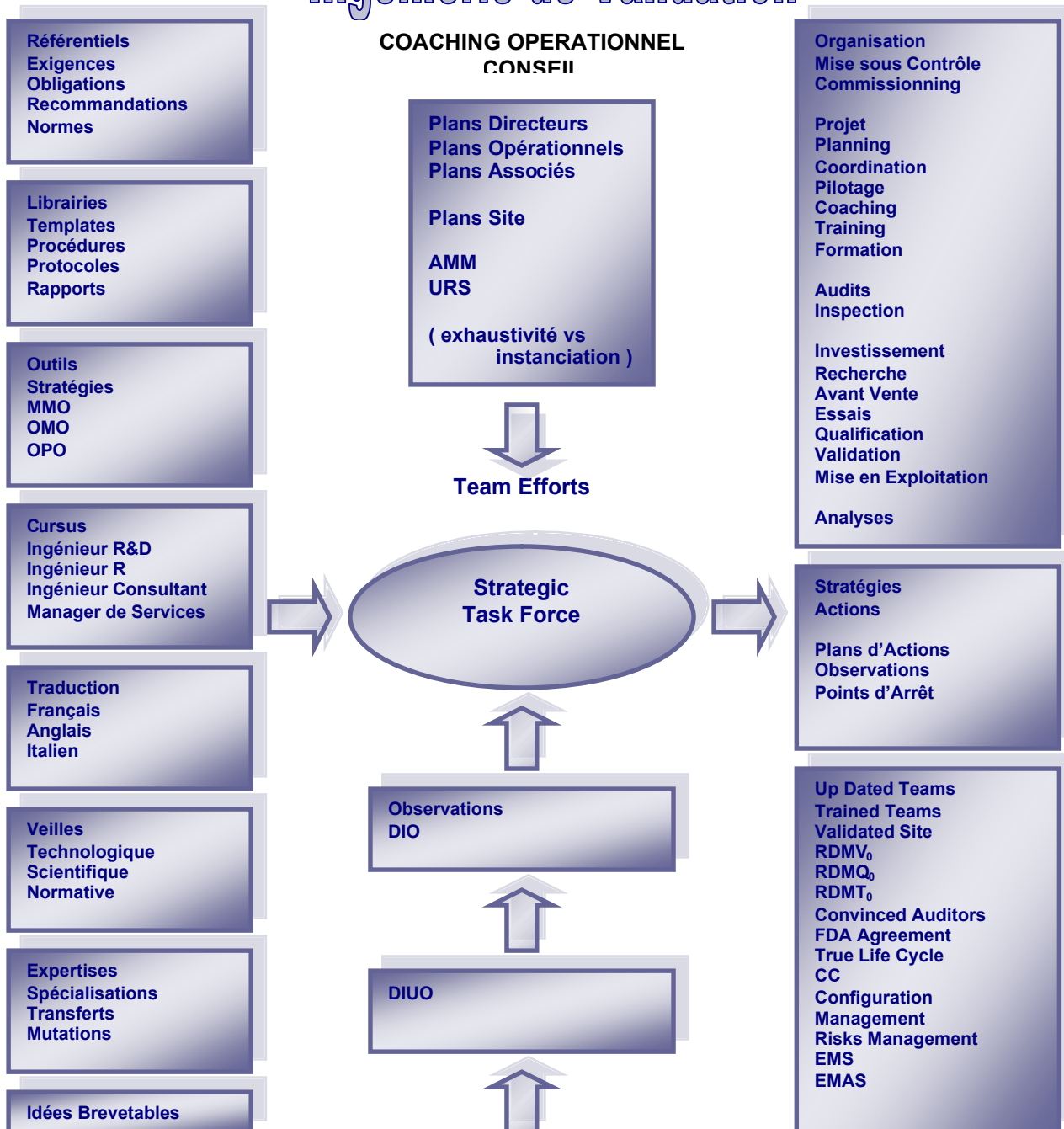
C.28.1 Short description of the training system.

29 C.29 STATISTICAL TOOLS

C.29.1 Short description of the statistical tools system.



Ingénierie de Validation



Optimisation des Coûts

○ Coaching	Ingénierie ISI
○ Tutorat	
○ Conseil	
○ Consultanat	
○ Support Technique	
○ Web Site Deployment	
○ Validationware Strategy	
○ Projet	Ingénierie Conduite
○ Organisation ; Mise sous Contrôle	
○ Planning ; Coordination	
○ Commissionnings	
○ Audits ; Analyses	
○ Déploiement ; Redéploiement	
○ Management par Résultats ; Management par Percée ; Gap Analysis Deployment	
○ Plans Site	Ingénierie Documents
○ Plans Directeurs	
○ Programmes Directeurs	
○ Protocoles	
○ Procédures	
○ Rapports	
○ SOPs	
○ Mops	
○ Audits	
○ Inspections	
○ Rédaction	Ingénierie Opérationnel
○ Exécution	
○ Qualification	
○ Validation	
○ Essais	
○ Plan d'Actions	
○ WFI	Ingénierie Process
○ Fluides	
○ Gaz	
○ Pure Media	
○ Procédés	
○ Process	
○ Processus	
○ Risques	
○ Formation	Ingénierie Hommes
○ Sensibilisation	
○ Coaching Opérationnel	
○ Training	
○ Software Pack	

1000 idées brevetables - 2000 outils fiabilisés et acceptés - 1000 outils de résolution de problème - 1000 méthodes de progrès - 1000 projets

Le Plan Directeur de Validation, référentiel corporate, projet, recherche, investissement, se veut de fiabiliser et d'optimiser les démarches et les actions de l'ensemble des acteurs de réalisation, de donner confiance et de convaincre l'ensemble des acteurs du projet.

Le Plan Directeur de Validation répond aux exigences FDA, ISPE et aux exigences les plus récentes en gestion de projet, maîtrise des risques et optimisation des coûts, en recherche et investissement ; inclut une démarche basée sur les pratiques cBEP, cBIP, cBTP, cBQP, GEP ; se conforme aux recommandations et exigences FDA, ISPE ; QSR ; cGMP, cGLP, cGAMP, cGALP, cGxP, cGAXP ; IEEE.

Le Plan Directeur de Validation introduit les notions d'Optimisation des Coûts, Conseil, Organisation, Mise sous Contrôle. Le Plan Directeur de Validation introduit les notions nouvelles de Recherche, Investissement, pré commissioning commissioning dé commissioning), mise sous contrôle, maîtrise des projets par les documents opérationnels, mapping et matricing, essais, mise en exploitation, exploitation, dans une démarche opérationnelle, prospective rétrospective concurrente parallèle, maîtrisées par une méthodologie originale.