Worldwide Deployment of an application

Fabienne Rouille, ABS Technologies, France
Yvane Boudraa, sanofi-aventis pharma, Antony, France

ABSTRACT
Inside the Bio-statistic and Programming (B&P) department, there is a System group who has as main objectives:
- support statisticians and programmers in their daily work,
- evaluate programming needs in term of tools or applications,
- participate, lead or coordinate the development of some applications such as an application to create submission and analysis datasets by implying external resources as expert,
- ensure the right installation worldwide of all tools or applications,
- train users,
- maintain internal tools/applications.

INTRODUCTION
This paper presents the different steps of a project to create, to install and to maintain a worldwide application for the B&P department and the different interactions with other departments.

In sanofi-aventis, B&P department is on 8 sites located in 5 countries.
The B&P department contains statisticians and programmers assigned to different therapeutic areas: Cardiovascular, Oncology, Thrombosis, Metabolism and Diabetes, Neurology, Psychiatry, Internal Medicine and Clinical Pharmacology and Pharmacokinetics considered as Phase I. All these statisticians and programmers are considered as users of worldwide application.

In addition, the B&P department contains other members assigned to transversals functions as Standard (definition of standard output, standard datasets, and standard rules of derivations), System (support and management of applications) and SOP & Training (definition of working rules and management of trainings).

In the scope of a system project, the system team must work closely with the B&P department and also with other departments as Clinical Data Management (CDM), Information System (IS) and Quality & Compliance (Q&C) particularly.
PROJECT STEPS

- **Initiation:**
  - The sponsor initiates a project by identifying the members of the project team and of the user working group.

- **User requirements:**
  - The user working group must identify the user needs and formalize the requirement in a document.

- **Analysis of needs:**
  - The project team analyses the user requirement to choose the way to respond to these needs, by an internal development or by a market tool.
  - The project team proposes also the workload and a timetable.

- **Functional Specifications:**
  - The project team and the user working group work closely to review all requirements and define clearly the definition of each requirement.
  - Based on that, a requirement could be abandon.

- **Architecture:**
  - IS, Q&C and the project leader work closely to determine the architecture, the servers needed and the installation and qualification procedures.

- **Development:**
  - Pre-building: development and conventions rules must be defined.
  - System technical development to link architecture and requirements. In addition, this must define also the administration of the future application.
  - Functional specification development to develop all objects responding to one or several requirements.
  - Unit testing to test all objects independently of the others.

- **Testing:**
  - Design and Cases must be defined for the system and the user parts.
  - Installation of the application to be tested by the system team before by the users.
  - During this testing phase, in case of failure, there could have one or several returns to the development.

- **Approval:**
  - Q&C and project team give their approval to deploy the application by finalizing all requested documents.

- **Deployment:**
  - Project team and IS coordinate the deployment on all sites and communicate to the users.

- **Training:**
  - Strategy: determine who must be trained, when users must be trained and how to train the users,
  - Material: preparation of the material,
  - Planning: management of the sessions.

SUPPORT AND MAINTENANCE

- **Support:**
  - Ensure the correct usage and the support of the tool delivered internally. In the same time, provide and update system documentation,
  - Provide tool to collect questions and provide answer in a respectable delay,
  - Organize user feedback meeting to discuss about issues or enhancement requested.

- **Maintenance:**
  - In case of bugs or enhancement requested discussed during user feedback meeting, development could be done,
  - Updated version provided though a change control following the same steps as in the project,
  - Update of all documentation based on remarks or corrections done.
CONCLUSION
Deploying an application worldwide has some advantages but that implies also some constraints at each step of the project:

<table>
<thead>
<tr>
<th>+</th>
<th>-</th>
</tr>
</thead>
</table>
| **Same Application** | • Centralization of needs  
• Unique understanding of each requirement |
| **More testers available and gain time in the testing phase** | • Multiple training for testers: French and English  
• Multiple access request  
• Management of the Time Differences |
| **Deployment in the same time on all sites** | • Planning Coordination  
• Availability of resources for the installation |
| **Support and Maintenance: system team closely to the users, then reactive and available** | • Not considered as productive team by the top management  
• Maintain resources |

However the main important thing to keep in mind is the entire satisfaction of the user.

CONTACT INFORMATION
Your comments and questions are valued and encouraged. Contact the author at:

Yvane Boudraa  
Sanofi-aventis  
20 avenue Raymond Aron  
Antony 92165  
Work Phone: (33) 1 55 71 63 95  
Email: yvane.boudraa@sanofi-aventis.com

Fabienne Rouille  
ABS Technologies  
41, rue de Liège  
Paris 75008  
Work Phone: (33) 1 53 45 83 33  
Email: f.rouille@abs-technologies.com

Brand and product names are trademarks of their respective companies.