

## **Annex II.3. Case studies**

## **Case Study -1**

### ***Case study name:***

**“Adaptations of services to support ‘Buy before developing’ strategy”**

### ***Context:***

The Directorate for Innovation and Technological Support of the European Parliament (DG ITEC) provides the European Parliament with information and communication technology services as well as printing and distribution services.

Within the framework of an innovation strategy, analysing, conceiving, developing and maintaining the European Parliament's information systems for the Members, the Political Groups, the Directorates-General, the European Ombudsman and the Data Protection Supervisor is a key mission that involves the realization of a great number of initiatives and projects in several domains every year.

Despite the high quality of the delivered results and the global satisfaction of its clients, DG ITEC has decided to implement a ‘Buy before developing’ principle recommended in the European Parliament's medium-term IT strategy.

Two teams identified to implement this strategy are Business Process Modelling Competence Centre (BPMCC) and Project Methods and Quality Competence Centre (PMQCC), which run two relevant services: Business Process Analysis (BPA) and the Software Selection process (SSP). These two types of client services can be looked at as two separate processes we want to integrate according to the aforementioned strategy.

Additional issue of note, are two projects run by BPMCC- ‘EP Business Map’ and ‘CII Business Map’ - that are building formal business frameworks to describe how the European Parliament and some other EU institutions work at the highest description level. The Enterprise Architecture methodology used is TOGAF and the key concept of the Maps are Business Areas - ‘groupings of actions depending on objectives and the product or service they should deliver’.

The objectives of the projects are facilitation of the IT & Business alignment and facilitation of business & organisational change implementation.

In concrete terms, the aim is to be able to assign IT solutions used in a number of EU institutions to commonly agreed Business Areas.

Certain Business Areas will have as their default IT strategy - ‘Buy before developing’.

***Description of the issue and constraints:***

Every year, DG ITEC initiates a set of projects that cover a broad range of areas that require the contribution of individuals with different skills, belonging to different nodes of the organization.

A number of yearly projects are Business Process Analyses projects, their aim is to thoroughly identify the users' need with the end goal of providing an IT solution. The deliverables of this projects are As-Is and To-Be models of the processes, Business Case and Business requirements as one would expect from the best BABOK practices.

Since 2012, requests for software acquisition are followed by our internal Software Selection Process called SSP. This client service is subject to conformance with internal policies concerning, but not limited to, configuration, hosting and security as they can be expected from a large public organisation dealing with sensitive data. This process has as an input a needs document which is conceived following the PMI standard.

What we look for are ideas on how to efficiently integrate these two types of projects, aiming for quicker 'time to market'.

The tenderer is asked to present an overall proposal that identifies the possible areas of intervention and a set of measures that, when implemented, will facilitate the strategy implementation of DG ITEC's 'Buy before developing'.

A number of constraints will also to be taken into account. They are:

- Maintaining as much as possible the current level of clients' satisfaction and quality of deliverables is a must;
- The global organization budget cannot increase;
- Rigorous and quantitative feed-back (Key Performance Indicators);
- The need of leveraging the current framework of methodologies, best practices to further align EP processes and IT, improving at the same time the overall maturity of the organization;
- The coexistence of external resources and officials
- Three different geographical locations and several scattered buildings; □ The existence of numerous heterogeneous legacy systems, technologies, infrastructures and procedures;
- The existence of a vast and differentiated community of stakeholders with competing requirements and needs.

***Specific instructions / questions:***

The tenderer is asked to structure his answer in the three parts:

1. Executive Summary: it concisely describes (max. one A4 page) the chosen approach, the most relevant interventions, the major risks and including a high level schedule

2. Overall Strategy: it describes the chosen strategy to achieve the best alignment of two types of projects, aiming for the optimal compliance with the DG ITEC's 'Buy before developing' approach" (max two A4 pages)
3. Detailed Implementation Approach. It must include but not limited to:
  - the different actions to be undertaken and their validation criteria;
  - the foreseen risks and the possible mitigation actions;
  - a list of major deliverables to be produced and their possible table of content;
  - the methodologies/best practices/tools adopted and the reasons for their adoption;
  - the composition of the teams at different stages in terms of required skills and competences;
  - monitor and control.

***Indicative criteria to assess the reply:***

1. Respect of mentioned constraints, instructions and consistency through the different parts of the proposal.
2. Form, completeness, conciseness and clarity of the solution.
3. As for the content, the following elements will be assessed in accordance with the coverage and quality criteria:
  - Completeness of the scope
  - Understanding of the clients' needs
  - Degree of innovation of the proposed solution
  - Relevance and justification of the recommended strategy and approach
  - Recommended principles and methodologies and their pertinence
  - Foreseen roles and team composition

## **Case Study -2**

### ***Case study name:***

<b>Detail Technical Architecture (DTA)</b>
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### ***Context:***

<p>The Directorate for Innovation and Technological Support of the European Parliament (DG ITEC) provides the European Parliament with information and communication technology services as well as printing and distribution services.</p>
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<p>Within the framework of an innovation strategy, analysing, conceiving, developing and maintaining the European Parliament's information systems for the Members, the Political Groups, the Directorates-General, the European Ombudsman and the Data Protection Supervisor is a key mission that involves the realization of a great number of initiatives and projects in several domains every year.</p>
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### ***Description of the issue and constraints:***

<p>PMM4EP is a global Project Management Methodology aimed at guiding the project manager in its daily activities on projects, analysis or studies. PMM4EP is based on the PMBOK version 5 of the Project Management Institute.</p>
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<p>PMM4EP lifecycles is the series of phases that a project passes through from its initiation to its closure. The phases are generally sequential, and their names and numbers are determined by the management and control needs of the organisation: Pre-project, Definition, Realisation and Closure. During the Definition phase, the project team will have to provide the detail project architecture definition and description (DTA) to the infrastructure services that will provide the development and deployment environments.</p>
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<p>The DTA file is validated by the technical cell ALSA according to precisions given by the project team to the technical cell. The better the DTA, the faster the process.</p>
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<p>Once DTA is validated, it is sent to Operations that will organise a meeting with the project team to explain their own processes.</p>
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### ***Specific instructions / questions:***

<p>In the context of the future EP elections, the EP has a new website to develop called “The Citizens voice”. The purpose of the website is to record and show a responsive website with user-generated contributions. The application should have 2 distinct interfaces: one for internal administration and one for public access. The internal administration interface should be only accessible to EP staff and the external one to any user. The mandatory requirements for the application are:</p>
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| <ol style="list-style-type: none"> <li>1. The user is able to register (mandatory) and its contribution</li> <li>2. The user is able to efficiently search through different contributions</li> </ol> |
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3. The user is able to retrieve and edit its own contributions
4. The administrator has the right to approve/reject contributions (moderation)
5. An interactive web chat is available for users to communicate with the EP.
6. Provide a mobile responsive interface

A contribution is made of :

1. A heading - max 200 car.
2. A text - max. 1500 car.
3. 1 video or 5 pictures or 1 pdf document.

Based on the requirements, the standard development document (Annex xx) and the IT environment document (Annex yy):

- a) Complete a DTA document for this application respecting the development standards of EP and the IT environment preconisation
- b) Write a one-page report describing which non-standard EP components would you use for developing the application and why

***Indicative criteria to assess the reply:***

- respecting the development standards of EP: use of Spring, AngularJS, Ext-JS, ElasticSearch, ActiveMQ Artemis, HTML5 for mobile, Hibernate, REST etc.
- 2 applications to be designed, for user and administrator with distinct DB and with a communication layer
- the Network Schema should contain protocol names (HTTP, REST, WS etc.)
- the Application Integration Schema contains integration with external systems (other applications)
  - the one-page report contains alternative solutions from the same family of products (JS frameworks replacing standard JS, Application Servers replacing Tomcat, JSF replacing Spring etc.)

### **Case Study -3**

***Case study name:***

**Software Version Control**

***Context:***

The European Parliament is moving to the adoption of GIT as the standard Version Control System. To this end, a comparative study of 3 major GIT providers (GitLab, GitHub and Atlassian Bitbucket) needs to be done. The following criteria are a must for any of the 3 providers:

1. They offer an on-premise server option, which can be installed on a Red Hat Linux distribution
2. They offer an integration with Microsoft Active Directory for user management
3. They provide at least an online support package as part of their licensing model

***Description of the issue and constraints:***

Not applicable

***Specific instructions / questions:***

Based on the definition of needs and the standard development document (see Annex xx):

- a) Write a two-page comparative report describing how each of the 3 GIT server providers cover the mandatory requirements and the advantages and disadvantages of using one product over the others
- b) Write a one-page report highlighting the issues concerning a migration from an SVN-based version control system to a GIT-based version control system (highlighting user adoption strategies, learning curve, development tools coverage)

\*\* GitLab - <https://www.gitlab.com>

\*\* GitHub - <https://www.github.com>

\*\* Atlassian Bitbucket - <https://www.bitbucket.org>

***Indicative criteria to assess the reply:***

- cover all 3 mandatory requirements in their report for all 3 products
- giving alternative solutions to non-covered requirements (ex.: if no online support is available, they should check if other type of support is available)
- making a critical assessment of the products in comparison to the others
- being clear on the difference of model between SVN and GIT (one is centralized, the other distributed)
- specifying that the adoption and learning curve for GIT are higher than for SVN
- specifying tools coverage linked to the EP standard development tools (Eclipse)