Avoiding the Duplicate Application Trap

~ By Duncan Haughey

Have you ever wondered how much time and money organisations spend developing or buying duplicate software applications just because they do not know suitable applications have already been purchased or developed.

Experience and research suggest that organisations (especially large decentralised organisations) spend a significant part of their IT budget on unnecessary duplication. What if we put this money to more effective use elsewhere, or use it to improve the quality of the current application development?

A large multinational company I worked for had just this problem, developing, at least, five-room booking applications of varying quality. For the money spent, they could have produced or bought one world-class solution.

The problem is that many organisations do not have information about their IT inventory documented and available, so remain unaware of the problem. To address this consider these three distinct areas:

1. Availability of information
2. Approval process
3. Cultural change

Without information about what IT development projects are producing, organisations will continue to reinvent the wheel, largely unaware of the wasted IT budget. What we need is an Application Inventory accessible by everyone to give visibility of the organisation’s application portfolio. Alongside the inventory, a good approval process will make sure we do not start projects where a good reuse alternative is available. There is a need for cultural change so it becomes common practice, before proposing or starting a project, to ask ‘what exists?’ There needs to be more credit for reusing or adapting existing applications than creating new ones to support this.

Application Inventory

Creating an application inventory is no easy task, but a necessary first step in avoiding duplication. There are two useful approaches; architectural or project based:

Architectural Approach

Taking the architectural approach means mapping all your applications, business processes and technologies. After development or buying of each new application, add it to the inventory with information such as what it does, who the internal customer is, and the technology it uses.
Project-Based Approach

Using the project based approach means building up information about applications from project data supplied by the organisation’s project managers. The ideal scenario is where this information comes from the organisation’s project portfolio management system, keeping the overhead for collecting data to a minimum.

Once you have created your inventory, it is important to make it available - websites and web-based applications are an ideal way of making information easily accessible.

Approval Process

The stage and gate method is an efficient process for evaluating project proposals by passing them through a series of gates to assess their value and relevance to the organisation. Unlike many traditional methods, when after approval at the beginning of its life, a project runs unhindered to a conclusion; the stage and gate method assesses a project at several points during its life. This way the organisation confirms the expected benefits are still relevant and the project will still deliver good value. If not, stopping the project before its conclusion saves money and allows the use of resources to greater effect elsewhere.

Figure 1: Stage and Gate Method Diagram

1. The Concept Gate gives visibility of planned projects and an opportunity to find areas of real or potential duplication
2. The Decision Gates are Charter, Contract and Rollout - these are ‘go-no-go’ gates
3. The Quality Gate is the Launch Gate used to check the quality and completeness
4. Not all decisions are at Gates - there will be exceptions

Checking for existing suitable applications should be part of the project approval process at the concept or charter gate, supported by your gatekeepers (approvers) and Project Management Office.

Cultural Change

Many organisations suffer from the ‘not invented here’ syndrome. Developers like to invent and are not keen on reuse. When this happens, people spend more time justifying why they cannot use an existing application than why they can.

Ideally, customers should be able to check the organisation’s application inventory to see what exists that meets their needs before proposing a project. More realistically, the project manager will do this when given the project. There needs to be more credit for reusing or adapting existing applications than creating new ones. A useful phrase to describe this is - 'steal with pride.' Reuse is not stealing as long as you do not infringe copyright or licencing agreements.
The benefits of application reuse are:

- Higher quality (a tried and tested solution)
- Less rework (bugs already found and removed)
- Lower cost (changes and configuration work only)
- Shorter duration (more of the customer requirements already met)
- Greater customer satisfaction (fewer bugs and the route to a faster solution)
- Simplification (less complexity in the organisation’s application portfolio)

Here are the steps organisations can take to lessen duplication:

- Create an application inventory - map all your applications, business processes and technologies
- Make the inventory available on your Intranet for easy access
- Avoid the 'not invented here' syndrome by positively encouraging and rewarding reuse
- Introduce a project approval process and use it to find and remove duplication
- Use your Project Management Office and gatekeepers to support (and if necessary) enforce the initiative

It will take time and effort to make this work within your organisation, but be patient, and the rewards can be significant.