Software Development & System Delivery Strategy

Introduction

Software development is a team based activity, requiring the collaboration of the line-of-business personnel, sales staff, software developers, all working towards a common goal. But, all too often, these extended teams fail to produce meaningful results. Often the best business ideas fail to be "discovered" or communicated. But even with communication, execution failures are rampant, causing the failure of nearly 60% of projects. The resulting inefficiencies cause delays, frustration and ultimately a loss of business agility.

In Systems executives and staff have learnt from long experience that this failure rate can be significantly improved with an appropriate development approach or "methodology."

Methodology

The methodology adopted by In Systems for use in the majority of customer projects is based on an iterative approach involving a continuous cycle of design, implementation and review – overcoming obstacles and changing business requirements on the journey to a successful project outcome in a reasonable time-frame and at reasonable cost. This approach fosters open communications, more transparency of project progress, higher productivity, and greater customer satisfaction than other approaches, and can be used for new projects or for project recovery.

The key elements of this methodology are as follows:

- Establish partnerships between both customers' technical and business leaders and corresponding In Systems senior staff
- Utilise key developers and analysts with industry domain knowledge
- Embed technical teams, co-located with your business
- Work side by side with personnel across the company on an ongoing basis
- Use an iterative software development model
- Minimize business disruption with abstraction and integration with legacy systems if possible
- Incremental delivery of new functions
- Regular review and (re)alignment of priorities with business imperatives

Working with our customers, In Systems can provide the technical and business leadership to successfully implelement new projects or facilitate project recovery.

↗ Establish a Partnership

Only though a partnership between the client and the developer is it possible to ensure the system delivered meets the needs of the client and has widespread acceptance.

↗ Executives, developers and analysts with industry domain knowledge

In Systems staff have worked on and successfully delivered complex systems in the insurance space for both multi-national and national companies. This domain expertise is invaluable in expediting the gathering and agreeing of business requirements, and meaningfully translating those into a comprehensive and functional system. We partner across business and technical areas, complementing our expertise with that of our customers. Where required, we engage with external complementary people and organisations.

↗ Embedded teams co-located with business

Efficient communication is the key to project success. The impact on productivity is dramatic – and where informal channels of communication are facilitated and encouraged, many minor issues and queries can be quickly resolved and the project momentum is measurably enhanced. Conversely, segregation of development teams from customer staff – business leaders and/or system clients' can have a significant detrimental effect on the project. Key to the success of this model is broad and ongoing engagement with the customer's staff – business leaders, sales, operations etc. We have found that with any new system, organisational acceptance can be as big a challenge as the delivery of the system and an early engagement mitigates many project issues.

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↗ Work side by side

Frequent, simple and two way communications between the developers and the client ensures the developers properly understand what is required, and the client appreciates what is possible. It is this combination that ensures a quality result, with the flexibility built in where it is needed and the development focus is on what is important to the client.

↗ Iterative software development model

The premise behind iterative enhancement is to develop a software system incrementally. This allows the development team to take advantage of what was being learnt during the development of earlier, incremental, deliverable versions of the system. Learning comes from both the development and early use of the system by the staff involved. Key steps in the process start with a simple implementation of a subset of the software requirements and iteratively enhance the evolving sequence of versions until the full system is implemented.

↗ Minimise business disruption through legacy interfaces

Legacy system interfaces allow gradual replacement of existing system components.

This minimises disruption to the business, but can potentially complicate development. This complication is resolved through the use of abstraction of the interfaces. This abstraction removes most of the dependency of the new development on the old systems and avoids expensive re-work and new components are rolled out and integrated.

↗ Incremental delivery of new functions

Each release consists of new functions and capabilities along with fixes and minor changes to functions and existing capabilities already delivered. This on-going cycle provides reasonable expectations with respect to the time-frames for delivering of capabilities, a formal process for the fixing of minor defects and enhancements, and early feedback from key staff members.

↗ Regular (re)alignment of priorities with business imperatives

With each release, we take the opportunity to sit down with the relevant business area to review the new capabilities. We work with them to ensure a smooth introduction of the new capabilities, provide strategic guidance to help them understand and validate assumptions, address concerns and provide much needed visibility into progress.

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Case Study

Life insurance admin system - Unit linked investment and risk products.

Following the methodology: we established partnerships between our senior staff and the customer's leaders; provided key architects and team leaders with industry knowledge to the project; and co-located the team with the customer.

The team was initially small - 6+4 trainees (staff) including staff with specialist insurance knowledge. The team ramped up slowly to 12 over twelve months, then rapidly to 36 for a year before being scaled back to about 15. The team was a blend of contract and internal personnel located in the same building with the business.

Actuarial and Life Industry operations research personnel provided key architectural elements, and we attracted other key team members based on the merits of the project. Professional development team management and highly motivated and productive development personnel complemented the team. A culture of open access and regular social and technical contact was deliberately fostered to enhance communications. Mentoring and training of internal personnel was ongoing and actively supported.

The core administration system for a single insurance product was delivered first. This was interfaced to existing commission, re-insurance, claims, new business and accounting systems via simple database interfaces and SQL conversion routines. With this approach there were no dependencies between the old and new components which facilitated gradual replacement as a strategy.

The second deliverable was to add the generalised risk (life insurance) product and new business, followed by scheduled maintenance releases.

Review meetings were conducted weekly during critical phases, and monthly at other times. Each iteration of the development cycle lasted 5 weeks. Professional project management was used to ensure the alignment between business objectives and the project activities.

Regulatory changes necessitated changes to the objectives midcourse. This was dealt with through re-prioritisation of the deliverables and appropriate increase in resources. To ensure a smooth transition to an internal support model, 4 staff transferred to the customer's organization at the conclusion of the project.

The project was successfully delivered within budget at each phase, (total investment A$8.8M), and met an externally imposed timetable.

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Company

In Systems is an IT consulting firm located in Melbourne, Victoria. We have been providing high-quality consulting services to government and commercial sectors since 1990.

In Systems is dedicated to helping you achieve tangible business benefits from your IT projects in the areas of:

- Executive IT Management & Business Consulting
- Voice and Data Networking (design, implement, manage, review)
- Network and Systems Security (design, implement, manage, review)
- Software Systems (design, plan, develop, operate, review)
- Help Desk and Managed Services (design, plan, develop, operate, review)

We are very proud of our high customer satisfaction rate and continue to provide solutions to our clients' on-time and under budget. Our customers come from the following sectors:

- Defence
- Insurance and Banking
- Telecommunications Utilities
- Health
- Education
- Small and medium enterprises
- Venture backed start-ups

Principals

Each principal has over 25 years experience and is backed by a skilled team. We are dedicated to bringing this experience to help you achieve success with your IT projects.