Deliver with DSDM
Deliver with DSDM
Deliver on Budget
Deliver on Budget
Deliver on Time
Deliver on Time

DSDM E-INFO PACK

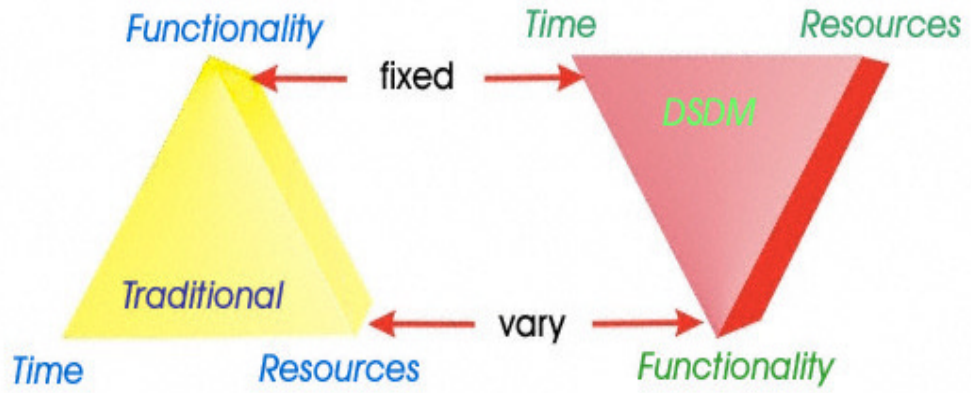
What is DSDM

DSDM is a project delivery framework to aid the development and delivery of business solutions to tight timescales and set budgets.

The DSDM Consortium is a not-for-profit member based organisation, which administers the licensing of organisations that are using the DSDM Framework. *Only Full Members are licensed to use the Framework.* Every member of the Consortium is encouraged to contribute to the continued development of the framework. The mission of the Consortium is to continuously evolve and promote the DSDM Framework. We aim to translate this evolution into products and services that our members can use to deliver solutions that better meet their business needs.

Why use DSDM

In traditional approaches the focus is on satisfying the contents of a requirements document and conforming to previous deliverables, even though the requirements are often inaccurate, the previous deliverables may be flawed and the business needs may have changed since the start of the project. In addition, time and resources are often allowed to vary during development. In DSDM, the exact opposite is true, time is fixed for the life of a project, and resources are fixed as far as possible. This means that the requirements that will be satisfied are allowed to change.



Project Failure! WHY?

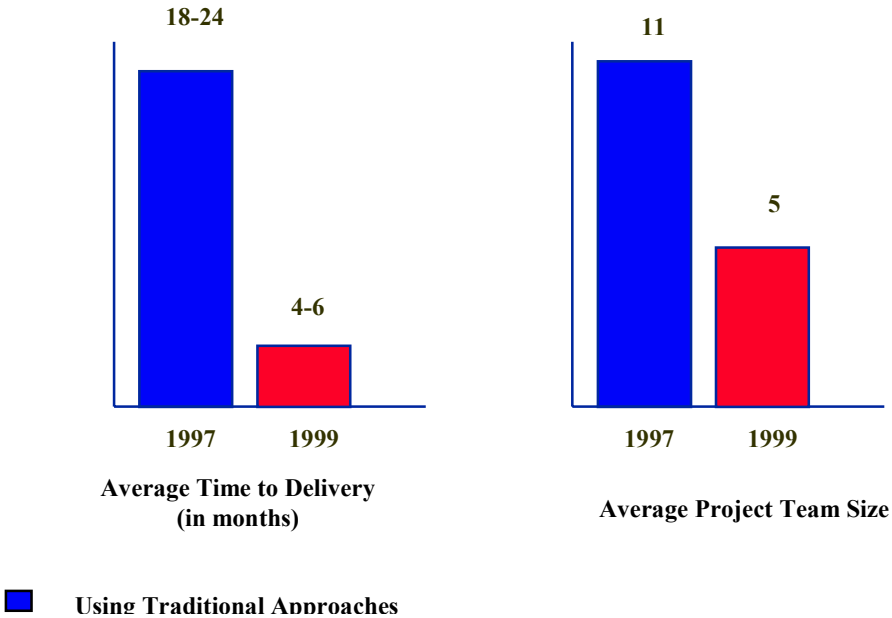
74% of all projects are challenged or fail due to:

- Not meeting business requirements
- Not meeting financial objectives
- People issues
- Poor management

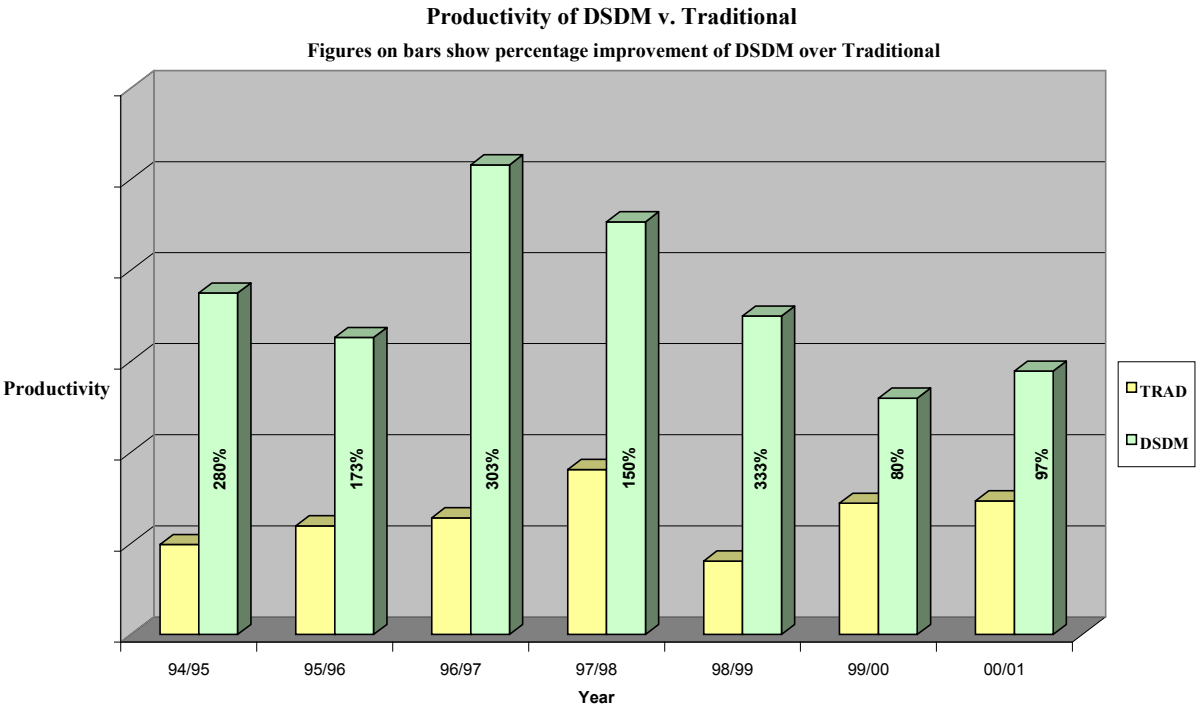
Source: Standish Group 2001

Solutions built using the DSDM approach address the needs of the business now rather than the traditional approach of attacking all the perceived possibilities. The resulting DSDM built solution is, therefore, a better fit to the true business needs, easier to test and more likely to be accepted into the users' working practices.

Traditional Approaches Versus DSDM



Source: British Airways IM Department, Newcastle, UK



Source: Study Commissioned by Xansa: 7 Year Longitudinal study

Business Case

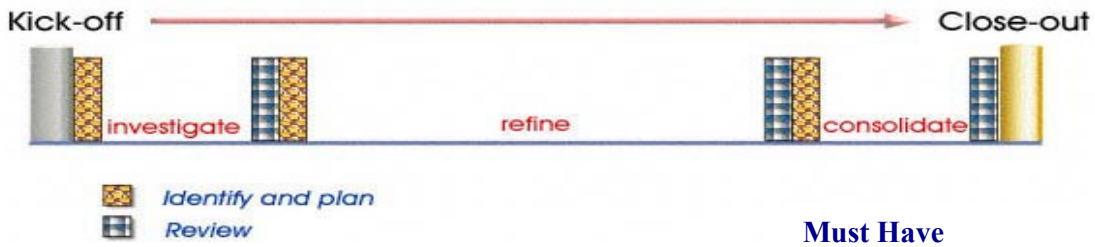
- Time to market is improved by using the Framework
- Using DSDM techniques improves the likelihood of projects being delivered on budget.
- All levels of the business are actively involved in a DSDM project resulting in:
  - Users who are more likely to claim ownership of the business solution
  - A reduced risk that the wrong solution is delivered
  - A final solution which is more likely to meet the users' real business requirements
  - Better trained users because their representatives have defined and co-ordinated the training required
  - Smoother implementation because of the established relationship and co-operative behaviour between all parties throughout the development.
- DSDM membership can help improve the learning rate of any organisation as they have access to the latest information about best practice in effective delivery of business solutions.
- DSDM membership can have also a positive impact on staff development and retention through providing a learning environment and the opportunity for professional recognition.

The Principles

1. **Active user involvement** is imperative
2. The team must be **empowered** to get the job done
3. The focus is on **frequent delivery of products**
4. **Fitness for business purpose** is the essential criterion for acceptance of deliverables
5. **Iterative and incremental delivery** is necessary to converge on accurate business solutions
6. **All changes** during development are **reversible**
7. **Requirements** are baselined at a **high level**
8. **Testing is integrated** throughout the lifecycle
9. **Collaboration and cooperation** between all **stakeholders** is essential

Techniques that make it work

Timeboxing



Prioritising

The requirements of any DSDM project are prioritised using the MoSCoW Rules. The o's are there for fun but they could stand for 'on time' and 'on budget'.

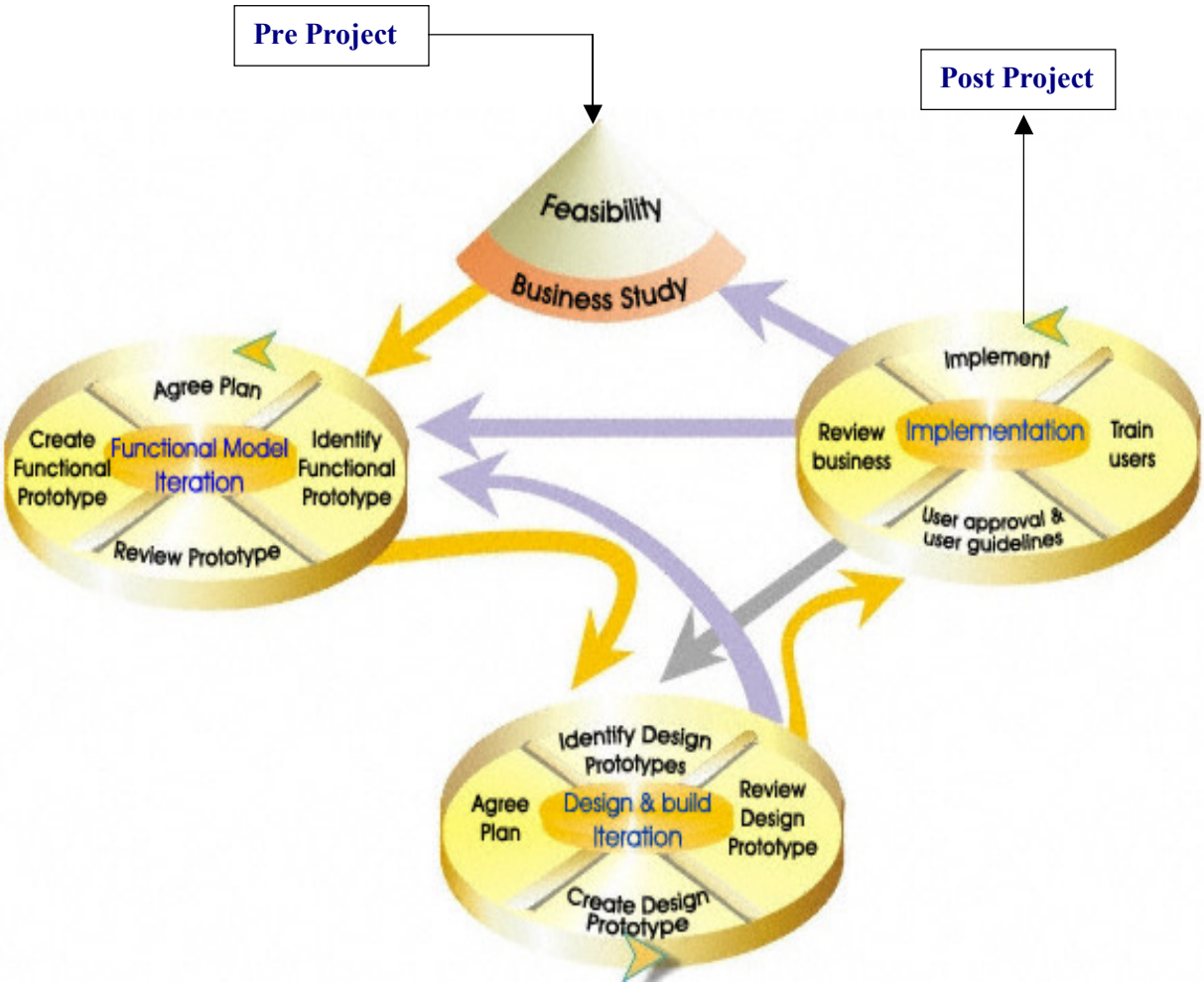
Must Have
o
Should have
Could have
o
Won't Have

The DSDM Development Process

The life cycle that DSDM uses is iterative and incremental. Therefore the system may be delivered to the organisation in a series of increments. In this way urgent business requirements can be addressed early while less important functionality is delivered later. In addition checks on the quality of all deliverables are made throughout the lifecycle.

The development process has five phases: Feasibility Study, Business Study, Functional Model Iteration, Design and Build Iteration and finally Implementation in the working environment. These are preceded by the Pre-Project phase and end with the Post-Project phase making a total of seven DSDM phases.

The Pre-Project, Feasibility and Business Studies are done sequentially. They set the ground rules for the rest of development that is iterative and incremental and therefore they must be completed before any further work is carried out on a given project. How the three later phases overlap and merge is left to a particular project to decide. After the project has delivered the solution to the business problem or opportunity, the project team is disbanded and the Post-Project phase comes into play: this covers activities such as keeping the solution operating effectively and checking that the expected business benefits have been achieved.



e-DSDM is a variant of DSDM designed for projects that are introducing business innovation through the use of web-based technologies. It is based on the proven DSDM framework for delivering good quality solutions that meet true business needs quickly and effectively. e-DSDM is for anyone who is working on an e-business development project.

e-DSDM facilitates the implementation of e-business initiatives addressing both organisational and architectural changes. The incremental and iterative approach will guarantee quick time to market and a constant match between (changing) business goals and their implementation. Strategy and projects will be strongly based on the business objectives.

By focussing on frequent delivery of products the business can harvest the e-business gains from the beginning and capture customer feedback from the outset. Return on investment will be realised at a very early stage

e-DSDM provides a process, which tailors standard DSDM to address the concerns of all e-business solution developments ranging from the production of simple websites to fully integrated e-business systems. The process starts with the development of a vision for e-business and continues through to deployment of the resulting solutions. e-DSDM provides definitions both of products and of the business and technical roles that will be required in the development of different categories of e-business solutions

When you are using e-DSDM you are able to link between this and the standard version of DSDM to make the most of the information available to you. e-DSDM is now also available in CD format to all Full Members for use on intranets and notebooks.

Users Of the DSDM Framework Say…

DSDM have provided the best framework, and process that I have ever seen, for getting projects in on time, and for success with Information Technology. When combined with the right people – whose energy, belief and passion are second to none, we simply cannot fail.
David Taylor, http://www.thenakedleader.com/

The system delivered less than we asked for, but more than we expected because we got exactly what we wanted (needed).
Dave Thompson, Shell Expro

At Syntegra we are obsessed with realising benefits. DSDM enables us to work with our customers to identify what really benefits them, then deliver a system that targets those benefits.
Linda MacCallum-Stewart, Business Analyst, Syntegra

In essence the DSDM process has enabled us to focus on and bring to fruition a project that has been outstanding for some time - establishing a presence on the web for Renault Financial Services. It enabled us to work within a framework which realistically managed our expectations ensuring that whilst the needs of the business changed from time to time together with time constraints on certain participants, by sticking to a set end date we have delivered sufficient functionality to make the project a success.
Simon MacAvoy, Marketing Director, Renault Financial Services

The benefits of agile approaches are now well recognized and publicized. However, adopting agile methods can be difficult in some enterprise environments where existing processes and functions are already established. DSDM provides an enterprise friendly wrapper for agile development best practices that is backed ' up by a wealth of supporting information and practical case studies. Quadrus Development Inc uses DSDM to deliver exceptional customer value by focusing smart people on the real business priorities.
Mike Griffiths, Technical Director Quadrus Development Inc Canada

BENEFITS

Deliver with DSDM

Deliver on Budget

Deliver on Time

Apart from getting a licence to use DSDM we provide you with a variety of products and services, which enable you to deliver business solutions, which meet the needs of your organisation. The products and services you receive include:

Framework for Business Centred Development

The on-line version of the latest DSDM Manual as well as a CD, for use on intranets. Contains practical guidance for projects from advice on planning to practical process details.

DSDM Templates

Templates developed for DSDM by members based on their experiences on DSDM projects. Also available for reference purposes are additional templates from Full Members.

White papers

Issues currently affecting the use of DSDM are researched and published to aid members in the use of DSDM.

Start Up Kit

How to get DSDM started in your organisation, suggestions for solutions to the problems you might encounter and a step-by-step guide to getting DSDM up and running.

e-DSDM

Online access to the e-DSDM manual, along with a CD copy. Tailored o address the concerns of e-business solution developments, ranging from the production of simple websites to fully integrated e-business systems.

Support from fellow professionals - Contact the Consortium if you have a problem and we will find another member who can give you advice.

Discounts: – Discounts on membership of partner organisations as well as on tools promoted by other full members on the website.

Timebox: The Online Newsletter – Receive regular updates from the Consortium: includes articles of interest about DSDM and wider business issues as well as updates on the latest events and product releases. If you wish to subscribe just Signup on the website and you will automatically receive a copy each month

For even more Benefits visit our website www.dsdm.org/en/membership/benefits.asp

LEVELS

The Membership/License levels are designed to meet the requirements of organisations, of varying sizes, as well as cater for individuals interested in DSDM but not using it.

Full Member Fees and Personal Member Fees are payable on an annual basis

All fees are listed on the regional Consortia websites

- North America http://na.dsdm.org/na/membership/types.asp
- International/UK http://www.dsdm.org/en/membership/levels.asp
- Benelux http://www.dsdm.nl/nl/default.asp
- Sweden http://www.se.dsdm.org/
- France http://www.dsdmfrance.com/

Joining the Consortium

To start using the DSDM Framework the process is simple.

International/UK

1. Join online at http://www.dsdm.org/en/membership/join_now.asp or
2. Fax a Purchase Order to us and we will invoice you or
3. Phone us on +44 (0) 1233 501300 and pay over the phone

North America

1. Join online at http://na.dsdm.org/na/membership/application.asp or
2. Fill in an application form and send it to us and we will invoice you

Applications for Benelux Sweden and France should be made via the applicable website.

As a Full Member once the payment is received you will get immediate access to all the online resources

Resource planning for the railway
How DSDM helped a large team in two countries meet tight deadlines

Deutsche Bahn (DB)
One of the world's largest transport organisations, Deutsche Bahn operates passenger and freight services within Germany and across European borders.

Carmen Systems
Based in Sweden, Carmen Systems AB is a world leader in integrated planning and decision-support solution for airlines and railways. The company develops solutions for optimal use of crews, vehicles and payloads. Clients include British Airways, Lufthansa and Air France. Carmen has the largest R&D section in the industry.

Background
Deutsche Bahn needed to reduce its crew planning cycles, cut operating costs, create positive cashflow and increase business flexibility.

The development was organised as a programme of three projects, each with aggressive timescales. To further complicate things, developers were based in Sweden and Denmark while users were from across Germany.

This case study deals with the first of these projects to deliver. It was focused on creating rosters (personal working schedules) for long haul on-train staff . The project team consisted of eight developers, two users and a project manager.

Carmen had already come across DSDM when working with British Airways. They chose a programme manager from Open World Management who is a DSDM Practitioner, Trainer and Examiner as they felt this would be a useful way of delivering the projects. A DSDM accredited Practitioner and Certified Facilitator was also brought in from Xansa to act as facilitator and mentor.

The Result?
The project delivered, not without pain and problems, but it got there on time.

Considering the aggressive timescales and the fact that several members of the team were new to Carmen and the core product, both companies judged the project to be a clear overall success. Key to this success was the planning of the last timebox in which the client agreed to drop a number of much-wanted requirements that, up until then, they had been hoping might still make it into the first delivery .

Process details
Workshops
Workshops were used to gather and prioritise requirements, map processes, plan, and put together a system architecture definition and configuration management strategy.

Planning workshops were run at both project and timebox level. They provided a set of tools and processes that enabled mixed business and technical teams to break down the problem and jointly decide on an approach to tackling it as well as a standard way of working that could be re-used later on all projects. Workshops were also useful for sharing understanding.

International issues
Much joint work was performed in English, although the Swedes were encouraged to learn German and developers with good German were placed in each project team. Developers and users would spend much time in each others' country, with the emphasis on users moving to Sweden in the early parts of timeboxes. Once communication architecture was in place, the

developers based themselves in Frankfurt. Travel was planned when the timebox was planned so that air tickets could be purchased as cheaply as possible. Social events such as sports and meals out were organised especially after major workshops or to mark the end of timeboxes. This undoubtedly helped the project by building team spirit and facilitating communication.

Active user involvement

From the start, the project was assigned a full-time former crew planner. His role was to manage involvement of other users, define requirements, prioritise, review, test and accept deliverables. From the second timebox, a second full time user was assigned to the project. Having these knowledgeable and dedicated users were one of the keys to project success.

Empowered teams

Team members were responsible for their deliverables. Each deliverable had an acceptor who was usually the Ambassador User, but could also have been someone from another team in Carmen. Regular team meetings, especially at iteration and timebox reviews, were vital in tracking project progress. As the project team was big it was a risk that meetings would consume too much time, so the whole team did not always participate in the whole meeting. On the other hand, it was sometimes most efficient to have the whole team present. Many short meetings were preferred to a few long ones.

Frequent delivery

Timeboxes were usually four or five weeks long, with intermediate deliverables. There was a general feeling within the team that, without the focus timeboxes gave them; they would not have succeeded in delivering the project on time.

Fitness for purpose

Where the objectives of a requirement as originally documented were not considered sufficient, test cases were created by the Ambassador User during the first iteration of a requirement prototype. Prioritisation maintained an awareness of objectives.

Iterative and incremental

The iterative prototyping approach worked very well. To ensure mutual understanding of requirements, frequent and tight communication and co-operation between the Ambassador User and Developers was required.

Development changes are reversible

A configuration management system was set up with a team member responsible for tagging releases. To keep up the frequent delivery principle, with related testing etc, it was necessary to spend considerable amount of time on configuration management.

Requirements baselined

At an early stage, a list of approximately 50 high level requirements were produced, with objectives and background. These were taken forward into timeboxes where the details were worked out. The team was encouraged to break down each requirement into sub-requirements in the Prioritised Requirements List (PRL) so that delivery could be focused on the most important elements. When requirements had to be de-scoped from the project, they were dropped at this level, rather than the higher one. The PRL became the project manager's main tool for tracking the status of requirements.

Testing integrated

Testing was absolutely vital and was indeed conducted throughout the lifecycle. Because of the nature of the system, integration and regression testing took up a great deal of time. This was planned at increasing levels in later timeboxes, with one developer concentrating solely on this task.

Cooperative and collaborative

In the beginning of the project, the frequent testing and the empowerment of the team had a tendency to emphasise the customer-supplier roles. But then the tight communication and many meetings enforced by the DSDM method started a process of team building between Carmen and Deutsche Bahn. This was considered an important positive side effect of the method.

How working on the project was seen by the project team

This is a summary of views from the project review.

Benefits

- The framework was a great help to deliver on time.
- There was good control of project progress.
- It was possible to manage customer expectations and system restrictions effectively.
- Regular tight communication led to a team feel that transcended organisational lines.

Concerns

A number of concerns were raised on the project. Some of these were a result of the nature of the project, while others came about because of the implementation of DSDM. Team members became weary of being away from home. This happened to both user and developer staff and was likely when working closely with people in other countries.

The team had also felt stressed by the frequent deadlines. This was related to a difficulty in understanding when it was possible to close requirements. As the project went on and in later projects, more effort was put into clearer acceptance criteria and test cases up front. There was also a constant focus on prioritisation and decomposition of requirements to identify their most important. It was also a result of a functionally rich solution being required within ambitious timescales.

However, directly related to this was that it was felt by the team that DSDM had made it possible to work within these constraints and that it had helped them to deliver on time while providing good control of the project's progress. It also made it possible to manage customer expectations and system restrictions more effectively. Use of DSDM's tight communication led to a team experience that transcended organisational lines.

Further information

For questions on this case study, please contact any one on the list below. It has been written, commented on and approved by all of us.

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Case Study
Tilney Investment Management

Background

Tilney Investment Management is one of the UK's largest independent fund managers. It has assets under management in excess of £5 billion. In order to further build on the fund

management side of its business Tilney decided that it needed to develop processes, which would provide quick, detailed and accurate information about individual client portfolios.

The Challenge

Tilney had only six months to implement the new processes and knew that user involvement would be essential. One of the principles of DSDM is active user involvement in the development process. Accordingly Tilney turned to DSDM to ensure that it designed and delivered the right application. The overall objective was to develop a system whereby individual client portfolios could be reviewed in a regular professional manner.

The Solution

The result was the Asset Manager project. An in-house development team was created because it was felt this would better ensure the application fitted the business purpose. User involvement and prototyping were two of the most critical factors in the development process. The first release went through five prototype cycles during which time it changed significantly, in the process becoming more acceptable to users. One of the principles of DSDM is a focus on iterative and incremental development. This enables both developers and users to see how the system will work and to identify if the system meets the project requirements. The first release was up and running within 6 months.

As the project moved forward consultation with a lead user replaced full-scale involvement with all users in order to reduce risk of overloading the feature set. However, the lead user consulted with the wider user community in order to ensure continuity of user involvement. The second release went through three iterations before it was rolled out 6 months later. The completed project enabled information to be extracted from the database that allowed fund managers to monitor key aspects of individual client portfolios, particularly allocation of assets and performance relative to the relevant benchmark. In addition, models could be applied in individual cases to determine the optimum investment mix according to specific objectives set by the client.

Update

This update of how Tilney is continuing to use DSDM was provided by John Bennett (IT Services Director)

Tilney are now delivering Version 6 of the Asset Manager product, having incorporated many new functions, and improved and extended original components significantly. The system is now in daily use throughout the company, and is an essential tool for the business in applying our fund management process. The continuing development has reinforced the value of the DSDM approach, and also highlighted some areas where extensions or modifications to the principles are necessary in this situation.

The 9 principles of DSDM appear at first sight to be simply common sense, stating the obvious, but experience has shown how important these words are, and where the ideal has had to be compromised in the real world. The following is a summary of how Tilney have fared in implementing some of the principles.

Active User Involvement:
We have applied this principle on two levels, neither of which conforms to the classic facilitated workshop approach. Mainstream strategic and infrastructure development has been driven by a benevolent dictatorship of one key business representative on each functional development. At the lower level, every single user is canvassed regularly for their opinions on the systems, and their requests have been incorporated, along the way as far as possible, leading to a high level of perceived ownership by the users.

DSDM Teams must be empowered to make decisions:
We have followed this principle with no real problems, and it has contributed considerably to successful delivery.

Frequent Delivery of Products:
But not too frequent. We have settled on a planning and delivery timescale based on seasons, which is a refreshing change from the nanoseconds that computing activity is normally measured in. This gives 4 major deliveries per year, each one with significant functionality.

Fitness for business purpose:
This has been a difficult cultural issue, which we are still fighting to do better. The problems are on both the IT and business sides. IT Developers want to build in features, many of which will never be used in the lifetime of the system. On the user side, the expectation is that anything less than a must have will never be delivered, so prioritisation becomes difficult. Involvement with just one DSDM project seems to overcome this issue very well.

Iterative and incremental development:
This principle is essential to the types of development that are suited to DSDM. The most worthwhile developments are in new areas, where the business requirement is not known in detail. It is also imperative to allow for the world changing, as usually happens during the lifetime of any significant development.

Testing is integrated throughout the process:
Yes, it does help – particularly in ensuring fitness for purpose, but there is still no substitute for the traditional approach before a software release of system testing (to make sure all developments still work together), regression testing (to make sure that existing functions are not compromised by new developments) and stress testing (coping with transaction and data volumes)

In conclusion, DSDM is a highly practical and productive methodology, which achieves results and makes the process more enjoyable for the participants. It isn't easy, and is not applicable to all projects. Where applicable, and applied positively by all involved, DSDM WORKS!!!

Case study
Ladok

Introduction
Ladok is a national consortium of 37 institutions in higher education in Sweden. Together, we develop and maintain a national system for student enrolment and documentation. Every year, 350,000 students are managed through the system. The hands-on work is mostly done by 2000 departmental online-users accessing 7 central computers. A maintenance group at the University of Umeå conducts software maintenance and is responsible for the development of the Ladok core system.

Background
The old Ladok system was designed and developed in the mid-eighties and began to show the obvious signs of the need for a redesign in the mid 1990's. A large re-engineering project called "Nouveau" was then started in 1995. Its focus was on the documentation part of the system, moving towards a new technology structure and a new graphical user interface. Nouveau also included new functionalities and a three-tier architecture. The development method used during the first 3 years of this project was a classic waterfall approach. However, by 1997 a number of issues were emerging that suggested a new approach was required.

From waterfall to DSDM
By 1998 the problems had culminated to such a degree it was necessary to solve them quickly if the Nouveau project was to succeed. The problems encountered were:

- Insufficient organisation and management
- Lack of developers and testers
- Functions delivered later than planned or not at all
- Insufficient testing
- Lack of trust in the new system, the old system was "too good"

The focus at that stage was on delivery of every desired functionality and this resulted in many variants of the same function. Requirements were often inaccurate and the business needs had changed since the project had started. There was also a sense of frustration from the people involved. The perception was that the users did not know exactly what they wanted and the developers did not deliver a "good-enough" product for the users.

The main objective was to finish the Nouveau project in 1999. That meant that the planned functions for main users (department administrators) had to be delivered by then. At the same time it would then be possible to shut down parts of the old system. In this situation and with a fast approaching deadline it would have been impossible to meet the objectives using a waterfall approach. It was at this point that a decision was made to change approaches.

Why DSDM and not another approach?
We did examine other approaches with the focus on quick delivery a key issue. The reason for choosing DSDM was that the framework was a proven approach. The fact we had an open user community was also favourable in terms of applicability of DSDM. Education was an important consideration with most project members undertaking a 3-day DSDM Practitioner or DSDM Project Management course. In January 1999 the switch was made to DSDM. The Nouveau programme was split into many small projects. We started with four parallel pilot projects. Each of these had between 6 and 8 team members and a fixed time limit of 3 months to develop 2 to 3 new complex functions. After that there were normally 3 to 5 projects running parallel. Today we have finished 27 DSDM projects.

Lessons learnt
The following describes some of the experiences we have had at Ladok as they relate to the DSDM principles.

Active user involvement
In each project we had one ambassador user and 1 or 2 testers also representing user interests. Ambassador users were professional users with many years of Ladok experience. Both the testers and the ambassador users worked halftime. Only the developer group were full time staff. We have had to

deal with the problems associated with part time team members. Time planning has proved problematic for some users. It is difficult to just close the door and say 'today I am working for the project' if your input is what others are dependant upon. This has meant that the issue of prioritisation is very important. Team members often needed to re-prioritise their regular work to deliver what the project needed. Without clear prioritisation the use of part time team members becomes very difficult.
Another aspect was prioritising of functionality. The needs of the home institution were sometimes contrary to the interests of the Ladok consortia. For some users their reason for being involved was the fact they could represent the interests of their home institution. However, the project members had to represent the interests of the consortia and this balance of interests was often very difficult to achieve.

Empowered teams

The project teams are fully empowered to make decisions. They have the mandate to decide over the functionality and to prioritise. The teams have learned fast to make their own decisions. This has meant a real cultural change as before this such decisions were taken by a steering committee. This tended to take a considerable amount of time, sometimes weeks, often months. Now there is a member of the steering committee in each project, working as team leader. The feeling that project members have the power and control over the product has resulted in highly motivated project members.
Another problem encountered was that the project members were often geographically dispersed. We have some projects where there is more than 1000 km between locations of users. In order to bring these project teams together each project has 3-4 meetings with most contacts via the Internet and/or telephone. However, this does not work without an ongoing engagement of all team members. Sometimes decisions had consequences for other ongoing projects or for maintenance. Then it was very important to co-ordinate - we did not succeed in every case. We have learnt to accept that sometimes the project team can make the "wrong" decision but in the most cases it is better than no decision at all.

Requirements base-lined at high-level

We have followed this principle but we have also learnt that DSDM is not applicable to all projects. Positive results and experiences were the reasoning behind trying to use DSDM in all projects. But in some projects an alternative approach works better such as when requirements are fixed at a low-level or there are compatibility needs to the old system and database dependencies.

Collaborative & co-operative approach

There was no real problem here but we had to pay attention to risks related to this principle. Teams are put together depending on knowledge and availability and this often results in new team constellations. Overall we have found stable teams make it easier to collaborate and spend less time building relationships at the beginning of each project.

DSDM is today the main framework for the Ladok consortia. It is the key to ensuring that our projects are delivered successfully and on time. It is more enjoyable to work in development projects for both the users and developers. Productivity has increased as the project members are given more responsibility and the projects are now delivered on time. Active user involvement and a focus on delivering the needed business functionality are important ongoing benefits for us.

Case Study provided by Sabine Brännström, System Developer, Ladok.