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Rod Clarke provides guidance, advice and support to businesses in successfully applying IS/IT in support of their business goals. He brings a pragmatic and business focused approach to the development of IS/IT strategy and the evaluation, selection, implementation and exploitation of information systems that underpin World Class performance.

This White Paper on the pilot approach to implementing change has been prepared to provide a single source of information on piloting to clients of The Delos Partnership. It is based on 20 years' experience of applying and enhancing the approach with many clients in Europe and includes the collective knowledge of several Delos Partnership members.

The approach was first developed at ICI Agrochemicals, a large international MRPII implementation in the mid 1980's. Rod Clarke (as ICI's Project Team member responsible for the pilot and cutover programme) and Richard Watkins (who played a lead role in operating and refining the conference pilot approach) developed and operated what has proved to be the most comprehensive approach to piloting yet developed. They have both subsequently applied, and developed, the approach in a variety of organisations.

This paper provides an outline of the approach as part of the Delos Change Journey, and then goes into detail on the purpose, pre-requisites, planning and execution of each of the pilots.

Whilst this paper has been prepared by, and is the responsibility of, Rod Clarke, the invaluable contribution of Richard Watkins, both in developing the approach and in reviewing and improving the paper, is gratefully acknowledged.

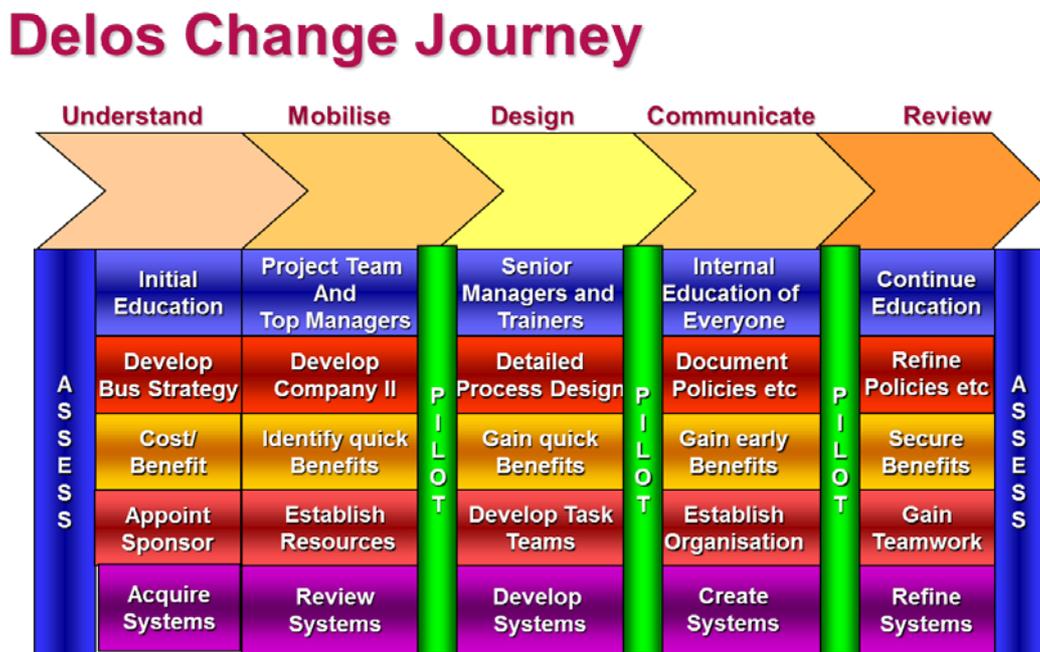
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THE DELOS PARTNERSHIP CHANGE JOURNEY

The Delos Change Journey has been developed over 25 years and is now acknowledged as the most effective approach to implementing a major business systems change. Initially it was developed for traditional MRPII implementations – it was developed during the 1990’s to provide support to the large number of organisations implementing a corporate ERP system, and is now used successfully for any major change project. Our experience shows that companies which follow the Change Journey approach have a very high success rate, not only in initially implementing their business change, but more importantly in sustaining the changes introduced and reaping significant business benefits.

The following diagram illustrates the main stages in the process, and is detailed further in the Appendix.



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Figure 1 - Delos Change Journey

This document is not intended to provide a full explanation of the Delos Change Journey, which in any case is highly tailored to meet the individual needs of each client organisation. However, a basic understanding of the building blocks that are used in all successful change implementations is necessary to maximise understanding of the value of the pilot programme.

UNDERSTAND

The first step in the Change Journey is to carry out an assessment of your current position, based on the Delos assessment methodology. This is often followed by an initial Education programme through a combination of public courses and tailored internal workshops. It is then possible for a team of key business managers, with Delos support, to identify the critical priorities for change and the resources required to implement the change,

MOBILISE

The second step of the Change Journey is to set up the project or programme organisation and governance structure, and begin to communicate the details of the planned change.

This is often supported by a series of tailored in-house workshops, designed to support the development of the outline policies, procedures, and organisation to achieve the company targets.

The newly established Project or Programme Team is the focus at this stage, and is crucially made up of key business personnel, released from their line responsibilities.

DESIGN

The third step of the Change Journey involves setting up task teams to create the reality of the ideas developed by the project team. Workshops and coaching/mentoring help the task teams develop the ideas into achievable policies, procedures, systems and jobs. To be successful, the task teams must be made up of key business staff, from all functions and at all levels, who come together for a few hours a week, away from their normal responsibilities.

These task teams also prepare the communication and training for the next phase.

COMMUNICATE

The fourth step of the Change Journey is to roll out the newly designed policies, procedures, systems and jobs through a formal education and communication process. At this point, everyone in the organisation must understand their role in the changes about to be implemented, and how they must work in the “new world”. The final stage of this step is the physical implementation of the changes, often called “go live” or “cutover”.

REVIEW

The final step in the Change Journey is to sustain the changes made, ensuring that the business achieves the maximum possible benefits, both financial and intangible, from the journey they have undertaken.

And, of course, the Change Journey doesn't stop – a post implementation review will effectively repeat the assessment step, enabling the next critical priority to be identified and addressed.

The fundamental difference in approach is that the Delos Change Journey is focused on a change of the whole company, and goes from designing “Company II” through to implementing “Company II”. Company II is a statement of the way that a company will operate which covers:

- Policies [what are the guidelines by which the company will operate – e.g. response time to customer, strategy etc.
- Procedures – how will each desired outcome in the company will be achieved – i.e. order entry, budgeting, sales forecasting etc.
- Responsibilities – who will be responsible or accountable for each process and activity in the company – i.e. Sales Forecasting, Master Scheduling etc.
- Roles – a description of the jobs that people will undertake to perform the activities required to deliver the company's objectives
- Measures – the key performance measures in the business that will determine whether the business is succeeding in delivering its goals and objectives
- Culture – the desired behaviour which people should adopt in their day to day activities – e.g. team working, continuous improvement, lack of blame seeking
- Software – the systems that will be used to support the business, which will be a complete description of the modules used to support the various processes in the business.

Throughout the Change Journey, all parts of the project/programme are focused on achieving a balance between the three critical elements of change:

- Culture and behaviour
- Ways of working
- Technology

It is only through focusing on all three elements that successful and sustainable change can be achieved.

Each of the pilots should be seen as a key checkpoint at the end of each step in the Change Journey.

- **First**, as a check of the Project Team's model at the end of the MOBILISE step.
- **Second**, as a check of the fully developed model at the end of the DESIGN step and to enhance the understanding of the model through the business.
- **Finally**, during the COMMUNICATE step, as a check of the whole model on a large scale across the whole company, with all staff being given the opportunity of testing the company in a pilot environment, rather than through putting the company at risk in the live business situation.

These three pilots are thus called:

- The **MOBILISATION** Pilot
- The **DESIGN** Pilot
- The **COMMUNICATION** Pilot

In each case, the next step in Change Journey should not commence until the pilot has been satisfactorily completed to the satisfaction of the senior management

team. The Delos Partnership has comprehensive checklists to support this evaluation.

Major change programmes in the 21st century inevitably involve changes in systems and technology. So, in addition to the three “Change” pilots described above, a series of “cutover” pilots (dummy go-lives) should be carried out to test the validity of the implementation process – in terms of culture and behaviour, ways of working and technology.

These take place prior to the physical implementation at the end of the Communicate step, and are designed to minimise the business disruption of the implementation.

The Delos Change Journey approach, underpinned by the Pilot Programme, differs substantially from some other implementation consultants’ and software companies approach in that the process is designed to:

- Applies to any major change programme, not just a system or software based projects.
- Test the working of the changed company in its entirety, and not just the robustness of the software module that will support a particular set of business processes (e.g. Financial or Purchasing transactions).
- Refine the development of the working model of the company over time, and help to get ownership of the new way of operating the company throughout the organisation.
- Test the model of Company II in a fully cross-functional manner, but in a test environment that will not threaten the operation of the company
- Validate that the task teams (in the Design pilot) and all staff (in the Communication pilot) are capable of carrying out their tasks, and have understood fully the implications of the education and training carried out in the previous steps.

Some of the differences can be highlighted as:

- None of these represent a walk-through of the system where “an order is taken, an order is raised, materials are ordered, received and issued. Production then produce, we ship the order, invoice and receive payment”. This is a software test and is necessary, but reveals no integration issues, nor addresses the three critical elements effectively. It is however, a critical prerequisite for a successful pilot.
- Neither are any of these processes where only one function or area pilots to see that their process works on their own. The critical issue is the integration across the entire organisation of all the three critical elements.
- They are not transactional tests, designed to test the ability of new systems to handle large volumes of users, transactions or data. They are process and job orientated. Again, such tests are crucial prior to carrying out the Cutover pilot programme.

Businesses are integrated, in that they operate complex, multiple processes at the same time. While someone is talking to a customer, someone else is taking an order, someone else is ordering materials, someone else is producing, someone else is accounting for that, someone else is planning what to do next week, next month, etc.

The issue is that people are all working at the same time but on different time periods and different horizons and that they affect each other all the time. Only a pilot programme which accurately models these simultaneous processes will successfully “prove” the design.

All the way we are testing that the new model of the business – Company II - will work.

THE KEY PILOT STAGES

The Pilot Programme, therefore, comprises a number of critical, sequential steps as part of the overall implementation plan. Each is covered in more detail in later sections, but as an overview there are two series or stages.

CONFERENCE ROOM PILOTS – a test of the company model carried out in a conference room environment.

CUTOVER PILOTS – a simulation of the company post go live, designed to test the validity of static and dynamic data prior to going live.

CONFERENCE ROOM PILOTS

THE MOBILISATION PILOT

Primarily designed to ensure “bug free” software, this pilot focuses exclusively on the core systems being implemented. It tests the planned configuration and outline business processes developed by the project team. Data flows through planned interfaces to and from other computer systems, both internal and external, are manually replicated during the pilot. Changes to the processes and systems are expected to be identified during the pilot, which takes place prior to the final build and test of the new systems. It will test the prototype model of the way that the company will work, once later system and business modifications have been completed.

THE DESIGN PILOT

This pilot is designed to prove the procedures and supporting systems before the mass training exercise. It tests the procedures, roles and all aspects of the system developed, built and tested by the project team and the Task Teams. The confidence and knowledge of the key business staff in the Task Teams in the new “whole company” system is enhanced and a real life test of the new processes and systems is carried out. Only minor changes to processes and systems are expected at this stage, assuming that adequate work has been undertaken in developing and understanding the systems and procedures, through the Task Team activity.

THE COMMUNICATION PILOT

This pilot (or series of pilots) is designed to enable as many as possible of the future users of the new processes and systems to experience how their new world will operate after implementation. Each user operates his new role, following the processes and using the systems as they have been trained to. Crucially, however, their role is being operated at the same time as all the others. No significant changes in design are expected at this stage – minor changes to processes or system reporting may take place (which will require

user training), but any major problems identified will require senior management review. Any system changes seen as critical will almost certainly delay implementation.

THE CUTOVER PILOTS

This series of pilots (sometimes known as Trial Cutovers or Dummy Go Live) tests the actual cutover activity. They are especially relevant when significant changes to systems are being made. A full dataset is migrated from existing systems into the new systems; all interfaces are run and a full set of batch programs runs.

A small number of users then review the data output from this exercise and diagnostic tools identify errors and omissions in the datasets. Any resulting changes are made in the source datasets before the exercise is repeated. The purpose of the cutover pilots is to eliminate as many initial data and system problems before the actual cutover. At least two, and normally three, cutover pilots take place prior to the real cutover. These pilots can be run in parallel to the Communication pilot.

DETAILED DESCRIPTION OF PILOTS

Each of these pilots is now addressed in detail in the following sections with information about each of the following issues:

- Purpose
- Participants
- Organisation
- Activities and Approach
- Timescales
- Data Volumes and Source
- Transaction volumes and source
- Location
- Pre-requisites – process design, system, training and education
- Success criteria
- Outputs
- Management

THE MOBILISATION PILOT

The Mobilisation Pilot is a key activity at the end of the outline design phase. It tests the robustness of the outline process and system design and also the initial organisational change proposals. It is a key project team activity to finalise the outline process and system design prior to entering the detailed design, build and test phases.

Purpose

- To simulate the overall process and system design prior to entering detailed design, process and system build and test.
- To identify any “bugs” in the core system.
- To confirm the system interfaces required for live running.
- To build the project team’s understanding of the total process and system. To confirm any required modifications to the core system.
- The Pilot simulates the world - Company II - as it will be some months after cutover – it is not a simulation of the cutover period itself.

Participants

The Mobilisation Pilot is a core Project Team activity. All project team members will take an active part in the pilot – there will be few other project activities during this period. It may be appropriate to include a small number of knowledgeable, key users in the pilot, especially those who are leading members of Task Teams. Where possible, team members should double up on a role – this ensures that at all times one is transacting with the system whilst the other is considering the process and identifying and recording issues. The interaction between the two people also helps clarify and resolve small issues.

The Technical members of the Project Team will administer the system during the pilot.

Organisation

The pilot should be organised in a room where there are workstations set up for each of the key roles in the new company model. For example:

- Sales
- Marketing
- Demand Management
- Master Scheduling
- Production
- Engineering
- Product Development
- Buyer
- Vendor Scheduler
- Finance
- Stores
- Data Management

Project Team members should swap roles during the course of the pilot to enable them to act as external testers of the other processes, which will help bullet proof these processes. People already familiar with the process being tested often miss significant issues that will be encountered by users or when the company will be running the new systems, procedures and organisation.

Activities and approach

The Mobilisation Pilot is primarily a simulation of the core processes and system. Inevitably at this stage, any system interfaces and proposed core systems modifications will not have been built. However, the whole company process should be simulated, with technical team members manually replicating planned interfaces to other systems.

As a test of the whole company process, an Integrated Enterprise Planning process should be an integral part of the pilot at all levels – this is an excellent opportunity for Senior Management participation in the Pilot.

After an initial period when a “scripted” walk through of the processes and system takes place, the pilot comprises individuals carrying out the key roles in the new organisation, utilising simulated communication flows to trigger activities. These should comprise of a set of formally thought through scenarios, designed to test the robustness of new procedures and organisational developments. For instance a large un forecasted order will be introduced into the pilot to test the processes and roles associated with Demand Management.

Each day will be structured to ensure that sufficient time is given to review issues raised and discuss their resolution. The standard Project Issue and Change processes should be operated during the Pilot. As a minimum a start of day briefing to all participants and an end of day issue review should be scheduled.

Timescales

Typically the Mobilisation Pilot will last around 2 full weeks, with 2 pilot sessions per day of around 2/3 hours and the remaining time spent on review and issue resolution. Each pilot session will represent a “day” in the new business, with all batch and interfaces being run (electronically or manually) between each session. This ensures that sufficient business cycles are operated to fully test the business – as a minimum a full monthly cycle must be completed, including financial close, any month end rollovers and the Integrated Enterprise Planning cycle. Managing the pilot “calendar” is a critical technical activity.

Data volumes and source

The purpose of the Mobilisation Pilot is not to test data volumes and data volumes will be very small. Typically 5-10 end items and 20-30 components (production and purchased) will be used. This will provide enough data and variety to test real life situations without the pilot participants spending all their time as “input clerks”.

The data items will be “real” – representative items (albeit simplified) that form part of the day-to-day business. In particular, care should be taken to set lead times short enough to ensure activity through the pilot. Capacities on work centres will need to be established such that they are meaningful in the pilot, where only a limited number of work centres and items are being used.

The data sets will be manually loaded by the Pilot Management Team prior to the Pilot commencing – they will also generate a “business running” start point for the Pilot, including open sales orders, open purchase and production orders, work in progress etc., to ensure that a balanced plan is in place prior to commencing the pilot. This will also provide a “pilot” on the Data management aspects.

Transaction volumes and source

The purpose of the Mobilisation Pilot is not to test transaction volumes and transaction volumes will be very small. Transaction data will be representative (but not “real”) data as experienced on a day-by-day basis in the business. The goal is not for participants to spend their time entering data, but in understanding how the new processes and systems will operate and interact. Thus the project team should be seeing the effect of a change to the forecast flowing through the system to all outlets, or the entry of a customer order impacting on supplier schedules, production schedules and the order entry system.

System Requirements

The Mobilisation Pilot will run with a small number of people, very limited master data and limited transactions. It is important that the system response times are representative of those expected for live running, as this can affect the practical operation of proposed processes. The focus is on the “core” new system only. Typically, the Mobilisation Pilot is run on a small system environment dedicated for the purpose. All operating and back up processes should be vigorously applied – there will be times during the Pilot when errors are discovered and an earlier version of the database must be restored – this is not the time to discover that it has not been backed up at the end of each Pilot session. A significant technical issue is managing the Pilot “calendar” as it rolls forward twice a day.

Operating the system is the responsibility of the Technical members of the Project Team, with support from the business Computer Centre as necessary.

Physical Location

It is desirable that the Mobilisation Pilot is carried out in a single room. It cannot be successfully run across multiple remote locations, as the vital constant interaction and issue resolution cannot be achieved.

The location must be appropriately equipped with computer terminals, printers and meeting facilities (electronic white boards etc.).

Pre-requisites

The Mobilisation Pilot cannot commence until the following are complete:

- Draft procedures and policies
- Initial base system configuration
- Initial interface requirements and data flows identified
- Pilot system available and data loaded
- Pilot “start point” generated and tested by Pilot Management Team
- Training and education of all participants in the new processes and system transactions

Management

A Pilot Management Team must be established well before the Mobilisation Pilot is planned to take place. This team will be responsible for all aspects of planning and executing the Pilot. Its membership must include representatives from all elements of the core Project Team – process design, data, change management, technical, project office. It is led by a full time dedicated person throughout – other members become fulltime on the Pilot around 1-2 weeks before it is run.

The Pilot Management Team is responsible for:

- Preparing a full project and resource plan for the Pilot
- Selecting the data sets to be used in the Pilot
- Selecting the key business situations (or scenarios) which must be simulated during the Pilot
- Loading the data sets into the system
- Preparing the start position for the Pilot with a balanced master schedule, open orders and other activities ready for the start point
- Operating the issue, change management and review processes
- Making all decisions during the Pilot with regard to its operation, delay, postponement etc.
- Reporting to the Project Board and Senior Management on the progress and outcome of the Pilot.

Success criteria

The success criteria for the Mobilisation Pilot are:

- All planned business situations have been simulated
- All procedures and system transactions have been executed
- All issues raised have been identified, assigned, prioritised and wherever possible resolved.
- Changes to the core system configuration have been documented
- Interface and modification designs have been developed.
- Changes to procedures have been identified
- Outline role specifications have been developed
- Outline organisational implications have been identified.

Outputs

The key outputs of the Mobilisation Pilot are:

- Agreed changes to the core system configuration
- Proposed core system modifications for Project Board and Senior Management review
- Revised draft procedures and policies
- Outline role specifications
- Interface designs
- Outstanding issues and their planned resolution
- Tested procedures, policies, roles and system before entering final build and testing

THE DESIGN PILOT

The Design Pilot is designed to prove the procedures and supporting systems before the start of the mass training exercise. It tests the procedures, roles and all aspects of the system developed, built and tested by the project team and the Task Teams. The confidence and knowledge of the business in the new “whole company” system is enhanced and a real life test of the new processes and systems is carried out. Only minor changes to processes and systems are expected at this stage. It is carried out after the Project Team has completed the training of the Task Team members, and after Senior Management has signed onto the new way of operating the company.

Purpose

- To simulate the overall process and system as built and tested by the core Project Team and the Task Teams – i.e. how the whole company will run after the final cutover to the new ways of working and the new systems.
- To identify any remaining “bugs” in the core system, supporting systems or interfaces.
- To build the business understanding of the total process and system.

The Pilot simulates the world as it will be some months after cutover – it is not a simulation of the cutover period itself.

Participants

The Design Pilot is a core Project Team and business activity. It will be the primary activity for many project team members, especially those in process design and the technical teams. Where possible, participants should double up on a role – this ensures that at all times one is transacting with the system whilst the other is considering the process and identifying and recording issues. The interaction between the two people also helps clarify and resolve small issues. All participants should try out other roles to make sure that the design is robust.

The Technical members of the Project Team will administer the system during the pilot, supported as necessary by the business Computer Centre.

Organisation

The pilot should be organised in a room, or a series of rooms, where there are workstations set up for each of the key roles in the new company model. For example:

- Sales
- Marketing
- Demand Management
- Master Scheduling
- Production
- Engineering
- Product Development

- Buyer
- Vendor Scheduler
- Finance
- Stores
- Data Management

The key staff assigned to each of these functional areas will spend most of their time at their own station, so that they can familiarise themselves fully with the activities associated with this area.

However, during the course of the pilot, opportunity should be given to swap around the roles, so that people can gain appreciation of other activities, and carry out the “idiots’ test” of other roles.

Activities and approach

The Design Pilot is a simulation of the whole company processes, roles and systems. All interfaces and approved modifications must be complete and tested prior to the Pilot – it is not designed to be a system test.

As a test of the whole company process, Sales & Operations Planning must be an integral part of the pilot at all levels – this is an excellent opportunity for Senior Management participation in the Pilot.

After an initial period when a “scripted” walk through of the processes and system takes place, the pilot comprises individuals carrying out the key roles in the new organisation, utilising simulated communication flows to trigger activities. This should include formally thought through and documented scenarios designed to test unusual situations that the company may encounter – a machine breaking down for instance.

Each day will be structured to ensure that sufficient time is given to review issues raised and discuss their resolution. The standard Project Issue and Change processes should be operated during the Pilot. As a minimum a start of day briefing to all participants and an end of day issue review should be scheduled. Modifications to system, procedures or organisation should be formally investigated, and then reported back to the pilot as and when they are resolved.

Timescales

Typically the Design Pilot will last around 3-4 full weeks, with 2 pilot sessions per day of around 2/3 hours and the remaining time spent on review and issue resolution. Each pilot session will represent a “day” in the new business, with all batch and interfaces being run between each session.

This ensures that sufficient business cycles are operated to fully test the business – as a minimum a full monthly cycle must be completed, including financial close, any month end rollovers and the Integrated Enterprise Planning cycle. Managing the pilot “calendar” is a critical technical activity.

Data volumes and source

The purpose of the Design Pilot is not to test data volumes and data volumes will remain small. Typically 10-15 end items, 5 sub-assemblies or bulk items and 50 purchased components will be used, with 3-4 work centres, 1 warehouse location and 2-3 production store locations and 4-5 customers and suppliers. Routings should be established for each part, and the Bills of Materials should be structured to represent how they will be structured in the real world. Where back-flushing will be used, the system should be set up to reflect how this will be operated.

This will provide enough data and variety to test real life situations without the pilot participants spending all their time as “input clerks”.

The data items will be taken from the company’s existing product portfolio (albeit simplified) that forms part of the day-to-day business. The data on lead times and order quantities should be set to ensure activity during the pilot. Capacities on work centres will need to be adjusted to show activity during the pilot. Lead times from suppliers may need to be shortened to gain activity during the pilot. For the purposes of Integrated Enterprise Planning, one or two families will need to be set up, in line with the thinking on how these will be established. Simplified accounts code structures should be established.

The data sets will be manually loaded by the Pilot Management Team prior to the Pilot commencing – they will also generate a “business running” start point for the Pilot, including open sales orders, open purchase and production orders, work in progress etc. Wherever possible, the same data sets will be used in both the Mobilisation and Design Pilots.

Transaction volumes and source

The purpose of the Design Pilot is not to test transaction volumes and transaction volumes will be very small. Transaction data will be representative (but not “real”) data as experienced on a day-by-day basis in the business. The goal is not for participants to spend their time entering data, but in understanding how the new processes and systems will operate and interact.

System Requirements

The Design Pilot will run with a small number of users, very limited master data and limited transactions. It is important that the system response times are representative of those expected for live running, as this can affect the practical operation of proposed processes, as well as building confidence in the managers of the system they will be training users in. Typically, the Design Pilot is run on a small system environment dedicated for the purpose. All operating and back up processes should be vigorously applied – there will be times during the Pilot when errors are discovered and an earlier version of the database must be restored – this is not the time to discover that it has not been backed up at the end of each Pilot session. A significant technical issue is managing the Pilot “calendar” as it rolls forward twice a day.

At this stage the system configuration and architecture, and all the programmes must represent exactly the system that will be used after going live. Therefore all modifications to the system, whether to fix bugs or bring about system changes, must have been completed. No further changes to the system are allowed after this point, unless a change is necessary to support the survival of the organisation, in which case a full formal process of identifying the impact is carried out, together with complete re-testing and training as necessary.

Operating the system is the responsibility of the Technical members of the Project Team, with support from the business Computer Centre as necessary.

Physical Location

It is desirable that the Design Pilot is carried out in a single room. It cannot be successfully run across multiple remote locations as the constant interaction and issue resolution cannot be achieved. However, recognition of remote locations that will be part of the on-going organisation of the company can be recognised by having partitions between areas. For instance, staff being located behind a screen could represent overseas customers who will be communicating via the Internet.

The location must be appropriately equipped with computer terminals, printers and meeting facilities (electronic white boards etc.).

Pre-requisites

The Design Pilot cannot commence until the following are complete:

- Change controlled procedures and policies
- Role specifications
- Base system configured and tested
- Interfaces built and tested
- Continuing legacy system changes built and tested
- Pilot system available and data loaded
- Pilot “start point” generated and tested by Pilot Management Team
- Training and education of all participants in the new processes and system transactions

Management

A Pilot Management Team must be established well before the Design Pilot is planned to take place. This team will be responsible for all aspects of planning and executing the Pilot. Its membership must include representatives from all elements of the core Project Team – process design, data, change management, technical, project office. It is led by a full time dedicated person throughout – other members become full-time on the Pilot around 1-2 weeks before it is run.

Wherever possible membership of the Pilot Management Team should remain unchanged between the Mobilisation and Design Pilots – this ensures maximum re-use and learning between the two.

The Pilot Management Team is responsible for:

- Preparing a full project and resource plan for the Pilot
- Selecting the data sets to be used in the Pilot
- Selecting the key business situations (or scenarios) which must be simulated during the Pilot
- Loading the data sets into the system
- Preparing the start position for the Pilot with a balanced master schedule, open orders and other activities ready for the start point
- Operating the issue, change management and review processes
- Making all decisions during the Pilot with regard to its operation, delay, postponement etc.
- Reporting to the Project Board and Senior Management on the progress and outcome of the Pilot.
- Ensuring that all documents are available to the pilot – procedure documents, policy documents etc.

Success criteria

The success criteria for the Design Pilot are:

- All business situations have been simulated
- All procedures and system transactions have been executed
- All issues raised have been identified, assigned, prioritised and wherever possible resolved.
- Changes to procedures and roles have been identified

Outputs

The key outputs of the Design Pilot are:

- Revised procedures and policies
- Revised role specifications
- Outstanding issues and their planned resolution
- Proven procedures, policies, roles and system before entering mass training
- Key staff, who are confident that they can carry out training of the users.

THE COMMUNICATION PILOT

The Communication Pilot (or series of pilots) is designed to enable as many as possible of the future users of the new processes and systems to experience how their new world will operate after implementation. Each user operates his new role, following the processes and using the systems as they have been trained. It provides a low risk environment for users to operate their new roles and responsibilities and acts as a final checkpoint that there are no fatal issues outstanding that will jeopardise the business after cutover. The confidence and knowledge of the users in the new “whole company” system is enhanced and a real life test of the new processes and systems is carried out. No significant changes are expected at this stage – minor changes to processes or system reporting may take place (which will require user training), but any major problems identified will require Senior Management review. Any system changes seen as critical will almost certainly delay implementation.

Purpose

- To simulate the overall process and system as built and tested by the core Project Team and the Task Teams
- To give users the understanding and confidence of how to perform their role post cutover, and to understand their relationships with other people in the organisation
- To validate the effectiveness of the system, procedural and organisational training and identify additional training needs
- To provide a simulation of system operation after implementation to ensure that the Computer Centre procedures are adequate for operation and support.

The Communication Pilot simulates the world as it will be some months after cutover – it is not a simulation of the cutover period itself.

Participants

The Communication Pilot is a core Project Team and User Training activity. It will be the primary activity for many project team members, especially those in process design and the technical teams. Where possible, participants should double up on a role – this ensures that at all times one is transacting with the system whilst the other is considering the process and identifying and recording issues. The interaction between the two people also helps clarify and resolve small issues.

If possible, a small number of “tame” customers and suppliers should be asked to observe (or preferably take part in) the Communication Pilot.

As this is a mass operation, the systems should be operated by the business Computer Centre with support from the Technical members of the Project Team.

Organisation

The pilot should be organised in a room (or series of rooms) where there are workstations set up for each of the key roles in the new company model. For example:

- Sales
- Marketing
- Demand Management
- Master Scheduling
- Production
- Engineering
- Product Development
- Buyer
- Vendor Scheduler
- Finance
- Stores
- Data Management

The people who will take responsibility for the activities in each of these functional areas will spend their time at their station, so that they can familiarise themselves fully with the activities associated with this area.

Activities and approach

The Communication Pilot is a simulation of the whole company processes, roles and systems. All interfaces and approved modifications must be complete and tested prior to the Pilot – it is not designed to be a system test.

As a test of the whole company process, Integrated Business Leadership and the series of monthly meetings must form an integral part of the pilot at all levels – this is an excellent opportunity for Senior Management participation in the Pilot.

After an initial period when a “scripted” walk through of the processes and system takes place, the pilot comprises individuals carrying out the key roles in the new organisation, utilising simulated communication flows to trigger activities.

Each day will be structured to ensure that sufficient time is given to review issues raised and discuss their resolution. The standard Project Issue and Change processes should be operated during the Pilot. As a minimum a start of day briefing to all participants and an end of day issue review should be scheduled.

Timescales

In order to maximise the number of users who participate and to ensure that the Communication Pilot takes place as close to cutover as possible a number of Communication Pilots is often necessary. Depending on the number of users, it may be necessary to run two Communication Pilots in parallel each for a half-day session per day. Managing multiple Pilot databases is a significant challenge.

Typically each Communication Pilot will last 3 full weeks, with a half-day pilot session each day of around 3 hours. Each pilot session will represent a “day” in the new business, with all batch and interfaces being run between each session. This ensures that sufficient business cycles are operated to fully test the business – as

a minimum a full monthly cycle must be completed, including financial close, any month end rollovers and the Integrated Enterprise Planning cycle.

Data volumes and source

The purpose of the Pilot is not to test data volumes and data volumes will remain small. Typically 10-20 end items and 50-100 components (manufactured and purchased) will be used. 2-3 Work Centres and 3-4 stock locations should be established. Where multiple factories and multiple countries will be involved in the new organisation, then these factors should be built into the pilot. This will provide enough data and variety to test real life situations without the pilot participants spending all their time as “input clerks”.

The data items will be “real” – representative items (albeit simplified) that form part of the day-to-day business. Lead times may need to be shortened to ensure activity through the pilot, and work centre capacities reduced to provide activity during the pilot. Thus the data items will be recognisable by the users, if not their exact specification. The data sets will be manually loaded by the Pilot Management Team prior to the Pilot commencing – they will also generate a “business running” start point for the Pilot, including open sales orders, open purchase and production orders, work in progress etc.

Some people will inevitably be more involved than others in using and updating the system – e.g. Master Schedulers. Others – e.g. marketing may only be involved as part of the monthly or weekly update of the forecast. It is still important that they review the issue and change logs to ensure their continued understanding and involvement.

Transaction volumes and source

The purpose of the Pilot is not to test transaction volumes and transaction volumes will be very small. Transaction data will be representative (but not “real”) data as experienced on a day-by-day basis in the business. The goal is not for participants to spend their time entering data, but in understanding how the new processes and systems will operate and interact.

System Requirements

The Communication Pilots will run with very limited master data and limited transactions, but with large numbers of users (typically in the 100-200 for each pilot). It is important that the system response times are representative of those expected for live running, as this can affect the practical operation of proposed processes, as well as building confidence in the users of the system. Typically, the Communication Pilot is run on a production sized system environment dedicated for the purpose. A significant technical challenge is the management of multiple Pilot databases to support parallel Communication Pilots. Operating the system is the responsibility of the business Computer Centre, directed by the Technical members of the Project Team. As it is often the case that more people are using the Communication Pilot system than the existing systems, it is sometimes appropriate for resource, support and operating priorities to be higher for the Pilot.

Physical Location

It is desirable that the Communication Pilot is carried out in a way that simulates the real world, whilst facilitating discussion and issue resolution. If multiple physical locations will be part of the new business being simulated then these should be part of the Pilot. However, each location should establish a “Conference Room” where all the pilot activity takes place – the Pilot cannot be operated from user desks. Where overseas users can be involved in a multinational business, then they should be involved in a local Communication pilot, linked to the business wide pilot.

Each location must be appropriately equipped with computer terminals, printers and meeting facilities (electronic white boards etc.). Where multiple locations are to be operated then additional facilities such as dedicated telephone and fax lines must be provided, as well as telephone conferencing.

Pre-requisites

The Communication Pilot cannot commence until the following are complete:

- All outstanding high priority pre-cutover issues are resolved.
- All users have been fully trained in the new procedures and system transactions
- All users have been tested in their understanding of the procedures and systems
- Pilot system available and data loaded
- Pilot “start point” generated and tested by Pilot Management Team

Management

A Pilot Management Team must be established well before the Pilot is planned to take place. This team will be responsible for all aspects of planning and executing the Pilot. Its membership must include representatives from all elements of the core Project Team – process design, data, change management, technical, project office. It is led by a full time dedicated person throughout – other members become fulltime on the Pilot around 1-2 weeks before it is run. In addition, a number of User Managers should be added to the Management Team. A high level of continuity of membership of the Pilot Management Team between the Design Pilot and the Communication Pilot is desirable – this ensures maximum re-use and learning between the two. Strong co-ordination is required between the Communication Pilot Management Team and the Cutover Management Team to minimise conflicts for resources and systems.

The Pilot Management Team is responsible for:

- Preparing a full project and resource plan for the Pilot
- Selecting the data sets to be used in the Pilot
- Selecting the key business situations (or scenarios) which must be simulated during the Pilot
- Loading the data sets into the system

- Preparing the start position for the Pilot with a balanced master schedule, open orders and other activities ready for the start point
- Operating the issue, change management and review processes
- Making all decisions during the Pilot with regard to its operation, delay, postponement etc.
- Reporting to the Project Board and Senior Management on the progress and outcome of the Pilot.

Success criteria

The success criteria for the Communication Pilot are:

- All business situations have been simulated
- All procedures and system transactions have been executed
- All issues raised have been identified, assigned, prioritised and wherever possible resolved.
- All users are confident that they can carry out their roles in the “New Company” post cutover

Outputs

The key outputs of the Communication Pilot are:

- Outstanding issues and their planned resolution
- User feedback for consideration by the Project Board and Senior Management prior to implementation.
- A statement that all users are ready and able to operate the new systems, procedures and organisation.

CUTOVER PILOTS

Whenever major system or software changes are an element of a change programme, it is critical that these changes are proven before they are implemented. Cutover pilots (sometimes known as Trial Cutovers or Dummy Go Live) tests the actual cutover activity - the validity of the static data item masters, Bills of Materials, Routings etc. and the impact of the dynamic data (Customer Orders, Purchase Order, Works Orders etc.) on the system and the company.

A full data set is migrated from the existing systems into the new systems, all interfaces are run and a full set of batch programs runs. A small number of users then review the data output from this exercise, and diagnostics tools identify errors and omissions in the data set. Any resulting changes are made in the source data sets before the exercise is repeated. The purpose of the Cutover pilots is to eliminate as many initial data and system problems before the actual cutover. At least two, and normally three, Cutover pilots take place prior to the real cutover. These pilots can be run in parallel to the Communication pilot.

Purpose

To test the planned cutover process and plans

- To identify data and system issues requiring resolution prior to live cutover
- To prepare users for their activities during and immediately after live cutover.

Participants

Cutover Pilots are managed by the core Project Team, supported by the Business Implementation Teams. The activities are carried out by a representative number of the Expert users who will be operating during the cutover period. Additionally, the system operation and support staff who will be responsible for the live cutover must carry out all Cutover Pilot activities, with support and guidance from the Technical members of the Project Team.

Organisation

The Cutover Pilot should be organised with each Expert user working at their own desk. The critical user areas for the Pilot are:

- Sales – customer/sales orders
- Demand Management – forecasting and demand
- Master Scheduling – item master and MPS data
- Production – routings, bills of material, capacities
- Engineering – routings, bills of material
- Buyer – supplier/purchase orders
- Vendor Scheduler – purchase items
- Finance – chart of accounts, balance transfers, accounts payable/receivable
- Stores – inventory balances

- Data Management – security of master data

Activities and approach

Each Cutover Pilot is a full rehearsal of live cutover – each identified step (whether system operation, manual or reporting/validation) must be carried out in strict sequence. The start, finish and duration of each step must be recorded to aid with revision of the cutover plan.

Once all static data load activities have been completed and validation checks completed, all dynamic data will be loaded (e.g. open sales orders, purchased and production orders). If dynamic data is to be loaded manually rather than through electronic interfaces then a representative sample may be loaded (at least 10%). However, this limits the value of the Pilot – wherever possible manual, dynamic data load should be minimised for example by closing all orders out in the old system and generating new orders in the new systems.

Once data load has been completed and validated to both operational and financial standards, the standard batch planning schedule should be run, generating, for example, MPS and MRP requirements.

Next a series of diagnostics should be run against the database to identify data values which are incorrect or “suspect” – examples include lead-time of 0, order policy of fixed quantity of 1, manufactured items without bills of material.

Finally, the Expert users review the diagnostics and the outputs of the planning programmes to identify changes that are required in master data, planning parameters and planned orders. The Expert users then make these changes in the relevant source system prior to the next Cutover Pilot.

Timescales

At least two Cutover Pilots should be carried out before Live Cutover – if possible three should be completed. Each Cutover Pilot should be scheduled over a weekend to minimise business impact. Typically the first Pilot is followed by a two-week period during which a large number of issues and changes can be addressed – it is then followed by two consecutive Cutover Pilot weekends and then the live Cutover weekend.

The Cutover Pilot programme usually overlaps with the Communication Pilots as both are optimised by being as close to Live Cutover as possible. This obviously places a significant load on Computer Centre, Project Team and user resource. The Expert users who are best placed to operate the Cutover Pilots should therefore be early participants in the Communication Pilot to ensure that they have completed this activity before Cutover Piloting begins.

Data volumes and source

A full data set of both static and dynamic data should be loaded during each Cutover Pilot. The Cutover Pilot databases should be “wiped clean” prior to the next Pilot load

taking place. Where data is being loaded manually rather than electronically then a sample of data may be necessary because of time limitations – this obviously reduces the value of the Pilot.

Each subsequent Pilot load should include a different sample of data to ensure that all data has been loaded at least once during the exercise.

Transaction volumes and source

The Expert users should be asked to carry out each of their transactions on the Cutover Pilot system once it has been loaded. This is a final test that there are no fatal problems with the systems. Some companies use this as an opportunity for a “volume” test of the system –however, at this late point there are limits to changes that can be made to hardware and software to overcome any problems. Such a volume test should be completed earlier in the project.

System Requirements

The Cutover Pilot should take place on the live production system environments, with full production level operation and support from the business Computer Centre. A significant challenge is managing the complex and frequent back-up and restore activities to support the Cutover Pilot.

Physical Location

The Cutover Pilot must be managed from a central location, with satellite control rooms at each business location. High quality communication capabilities are essential between centres, including telephone/video conferencing.

All user activity should be carried out at their normal place of work, although most activities will take place outside normal working hours.

Pre-requisites

The Cutover Pilot cannot commence until the following are complete:

- All outstanding high priority pre-cutover issues are resolved.
- All Cutover Pilot users have been fully trained in the new procedures and system transactions and participated in a Communication Pilot
- Complete, tested Live Production system available

Management

A Cutover Management Team must be established well before the Cutover Pilot is planned to take place.

This team will be responsible for all aspects of planning and executing the Cutover, both live and Pilot. Its membership must include representatives from all elements of the core Project Team – process design, data, change management, technical,

project office. It is led by a full time dedicated person throughout – other members become fulltime on the Team around 1-2 weeks before the first Cutover Pilot. As the Communication Pilots and the Cutover Pilots will be operating in parallel, it is not possible to have common membership between the two Management Teams.

However, strong co-ordination is required between the Communication Pilot Management Team and the Cutover Management Team to minimise conflicts for resources and systems. It is recommended that one member of the Cutover Management Team acts as the liaison point with the Communication Pilot Management Team.

The Pilot Management Team is responsible for:

- Preparing a full project and resource plan for Cutover
- Designing the diagnostics tests and tools for Cutover testing
- Operating the issue, change management and review processes
- Making all decisions during Cutover, both Live and Pilot with regard to its operation, delay, postponement etc.
- Reporting to the Project Board and Senior Management on the progress and outcome of the Cutover Pilot.

Success criteria

The success criteria for the Cutover Pilots are:

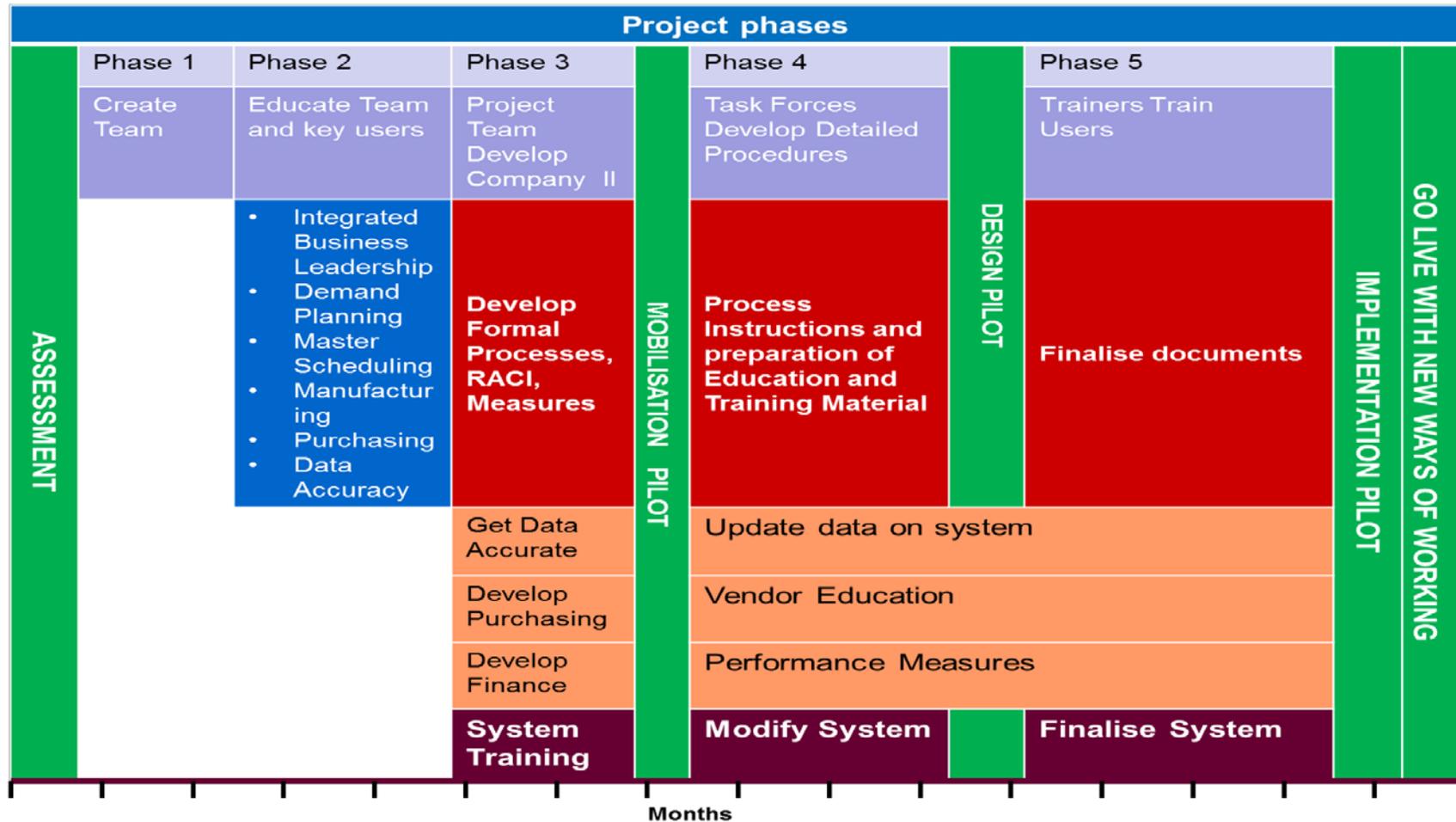
- All static data has been successfully loaded and validated in the new system
- All dynamic data (or an agreed sample) has been successfully loaded and validated in the new system
- The Cutover Plan has been validated and revised and is achievable in the timescale available for Live Cutover
- All issues raised have been identified, assigned, prioritised and where necessary resolved.

Outputs

The key outputs of the Cutover Pilots are:

- Outstanding issues and their planned resolution
- A report on the Pilot and Live Cutover plans for consideration by the Project Board and Senior Management prior to implementation.

APPENDIX: IMPLEMENTATION TIMETABLE WITH TIMING OF PILOTS



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