

CHANGING ATTITUDES – IMPROVING EFFICIENCY



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HOME



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NEXT

Jill Pritchett, Software Measurement Services Ltd.,
and
Dominic Michell, Serco Technology

Two different perspectives



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- The Consultant's view
- The Client's view
- Conclusions
- Our Recommendations to you
 - How you can benefit from our experience



The Consultant's view



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Jill Pritchett
SMS

The Starting Point



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- Serco Technology commissioned SMS to carry out an assessment of their software development activities
- The objective:
 - ➔ To compare Serco Technology to industry best practice and provide a basis from which to start a continuous improvement programme



The initial assessment results



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- Re-certification to ISO9001:2000 (TickIT) was in jeopardy
- Several areas for improvement were identified including:
 - Requirements Management
 - Document Management
 - Project management
 - Configuration Management
 - Metrics
 - Communication
- The level of change needed in each area varied



The Approach



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- A number of work streams were set up
 - Staff volunteers made up each team
 - A cross section from every team within Software Development took part
 - Individual Stream Leaders were put in charge of each work stream



The Work Streams



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These Streams were selected because:

- They were where the most weaknesses had been found.
- They aligned with the Organisation's goals.
- They would help towards the goal of ISO 9001:2000 retention.
- They were aligned to the people's capabilities at the time.

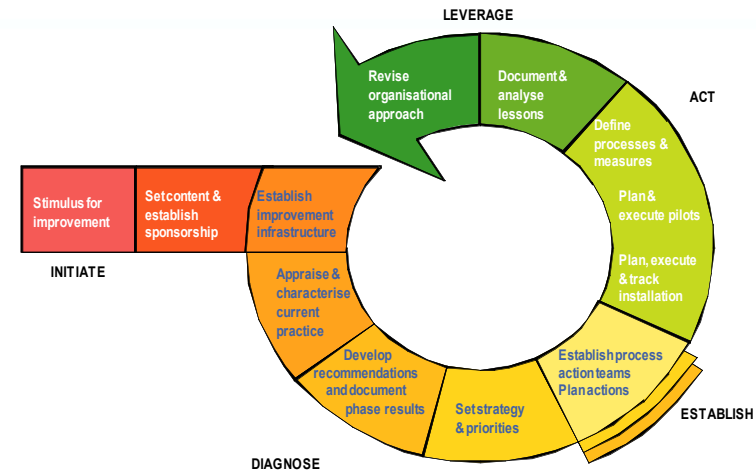
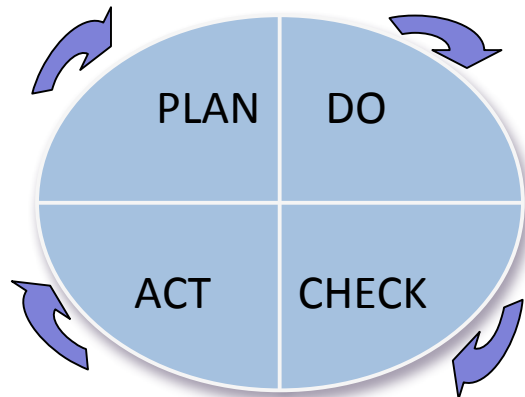
Methodology



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- A specific methodology was not followed.
- A common sense approach was adopted. Similar to the Ideal Wheel methodology even though this was unintentional.



- We also used the Plan, Do, Check, Act approach throughout the Prism project

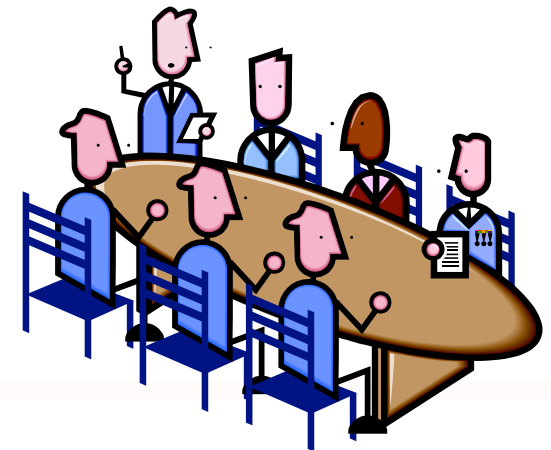
The Approach



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- The Steering Group met monthly
 - The Senior Management sponsor attended all the meetings
 - The Work streams presented their progress at each meeting
 - They could seek guidance as required



The Approach



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- SMS acted as guide and mentor throughout the project

- Email support between site visits
- Attended all the Steering Group Meetings
- Held regular meetings with each stream to address any problems
- Encouraged the teams to maintain momentum
- Where staff were inexperienced worked with them on their solutions
- Held workshops to enable staff to learn and try out new techniques e.g. Reviews



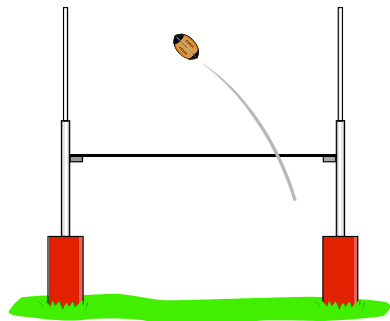
Why this approach was chosen



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- To promote an inclusive approach which encouraged staff commitment and ownership



- Enabled clear goals and targets to be set with everyone understanding their responsibilities, priorities and objectives.

- It offered a shared vision with everyone pulling in the same direction



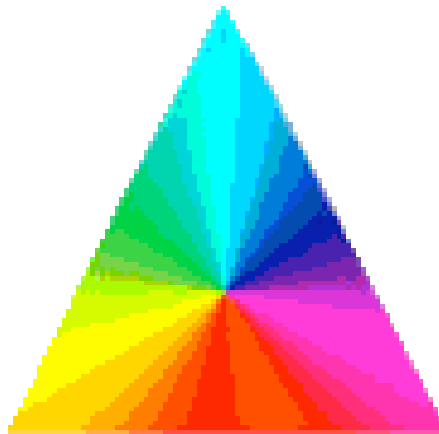
The launch



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- An improvement programme was set up
- A staff competition was run to find a suitable 'brand' for the project
- The staff called it PRISM



Process, Review, Implement, Standardise, Maintain

What worked well and why

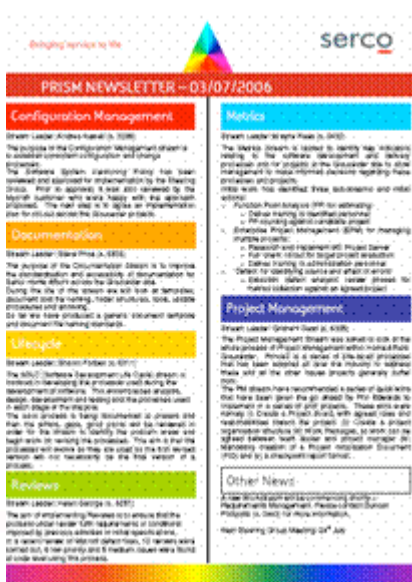


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• A separate Communication Stream

- Co-ordinated messages from all work streams
- Produced regular Newsletters, Intranet notices, emails to increase visibility of progress
- Facilitated both internal and external communications



Example Newsletter

• This worked because:

- Consistency of messages was centrally co-ordinated
- It gave visibility throughout the project

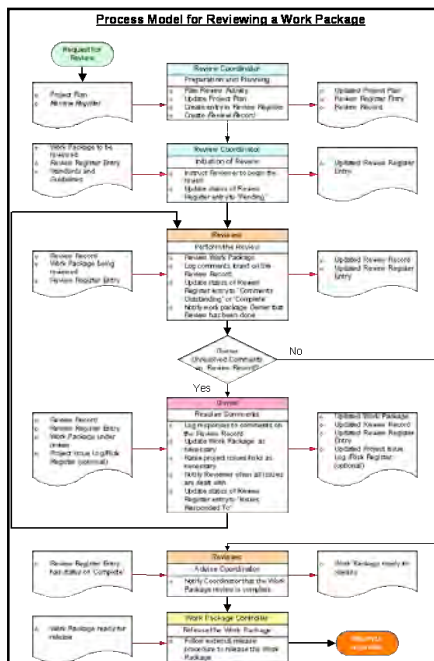
What worked well and why



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Standard style for process diagrams



Example Process Diagram

This worked because:

- It forced people to really understand how processes work
- If they could not show the input (start of the process), activities (who does what), and outputs (deliverables) then there was something missing
- This work not only made integration easier but also highlighted errors they had not realised before
- Also enabled people to understand where effort was being wasted

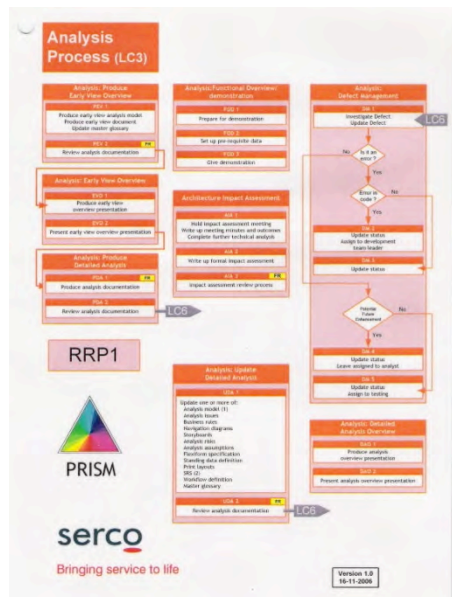
What worked well and why



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• The Development of an overview Life Cycle diagram



Example Prompt Card

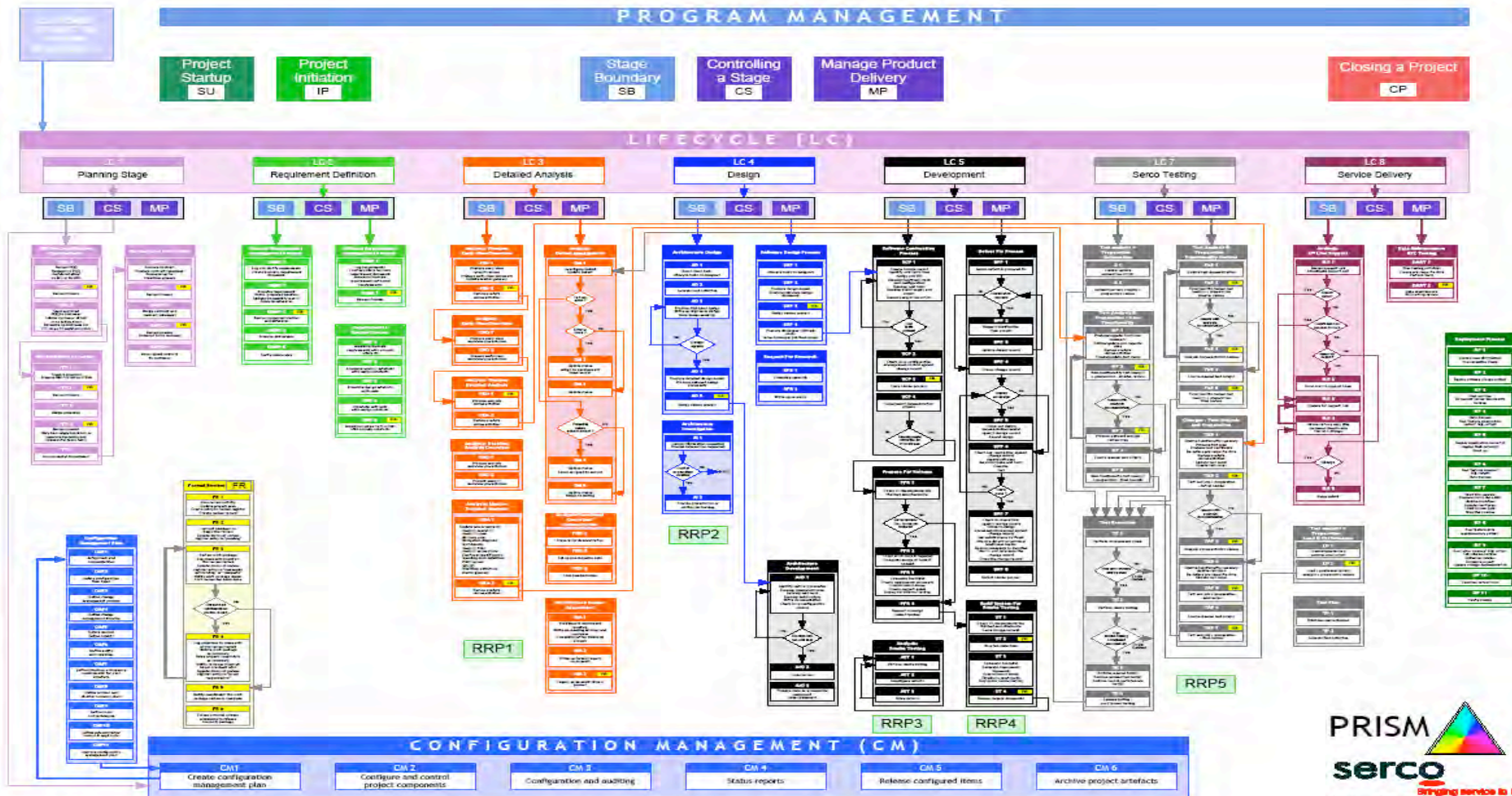
• This worked because it:

- ➔ Was based on the processes developed by the streams
- ➔ Showed how everything (and everyone) fitted together
- ➔ Could be split into smaller chunks as prompt cards e.g. Analyst looking at Requirements phases
- ➔ Overlaid with the Prince 2 Project Management life cycle
- ➔ Brought in standard checkpoints e.g. Formal Reviews
- ➔ Displayed the diagrams around the site enabling both staff and customers to see how the work gets done

The early Life Cycle Diagram



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What worked well and why



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- Staff development
 - Some stream leaders changed significantly during the project
 - The Software Development Manager now has a better appreciation of which staff might be best suited to Project Management positions in the future



Biggest problem



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- The Metrics work stream was badly affected by the availability of the Stream Leader who kept getting taken off to do other tasks and also the lack of experience with metrics.
- Unfortunately momentum was lost and there was an inability to identify suitable alternative resource to take this stream further.
- This has had a direct impact on the ability to provide quantifiable results for the project as the planned data to show the before and after position was not available.



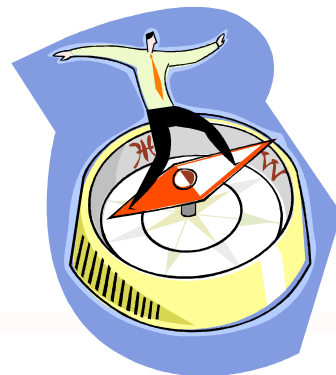
What had to be adapted



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- Not all the processes worked well first time so there had to be iteration to develop the optimum solution
- Not all Stream Leaders had the skills needed to convince their colleagues that changes were worthwhile. Some changes were made to the Streams resources as a result
- The format of the Steering Group meetings was adapted so that they did not become 'boring' reviews



The Client's view



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Dominic Michell,
Serco Technology

Difficulties in managing the change project



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- The staff initially held beliefs:
 - That the change project would interfere with their day jobs
 - And that management commitment would falter over time
- These proved to be unfounded
 - Management commitment was maintained for the whole 9 months of the project
 - Management's commitment of up to 25% of total staff effort for the whole period was not required
 - The project was completed with just under **4% of total staff effort actually used**

Skills staff obtained



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- The staff went through a significant change and as a result they now have a better understanding of:
 - How difficult change can be if it is not handled properly
 - How their colleagues feel about change
 - How some solutions may help one area but have a detrimental impact elsewhere



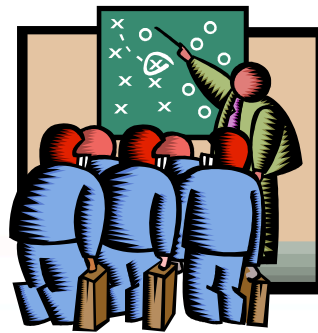
Skills staff obtained



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- A willingness to:
 - Adapt to new ways of working e.g. accepting reviews as a normal activity
 - Accept that the quality of work is each individual's responsibility
- An ability to think of things from a more strategic perspective, rather than an individual's



Effect on customer relationships



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- The use of the overview life cycle diagram has helped customers visualise the software development activities
- Using the process diagrams has made the customers more aware of what is involved in a 'simple change request'
- Communication has improved as a result of a better understanding of the processes

Most significant results from the 9 month project



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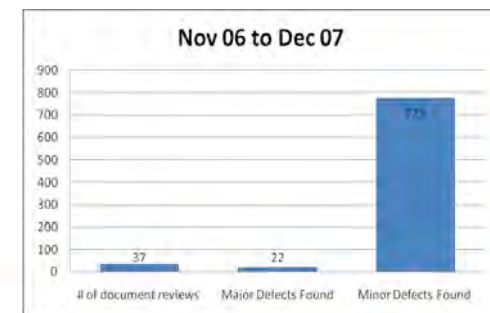
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- Retention of ISO 9001:2000/ TickIT certification



- The first 6 figure project to use the full end-to-end life cycle came in on time and under budget by 29%

- Reviews now being used to find and fix errors in documentation which previously would have continued into development



Document review results

Defect Levels – how was this affected?



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- Testing was outside scope (separate department)
- Test coverage was being changed at the same time as the Prism project
 - Depth of testing vastly different now
 - Bigger emphasis on finding legacy defects



Defect Levels – how was this affected?



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Result:

- ➔ Fix rates has vastly improved
- ➔ Previously unreported defects now identified
- ➔ 95% of bug fixes now happen 1st time i.e. No iteration
- ➔ Bug fix cycle more controlled
- ➔ Better communication between test and development departments
- ➔ Comparison of pre Prism Project and Post Prism project shows more reliable defect data is now available

How was overall efficiency improved?



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Before Prism	After Prism	How this improved efficiency
Ad hoc processes which were not fully documented.	Set of agreed processes in use.	Consistency in how people work with built in controls. Better relationships with clients
Document templates were not standardised.	Majority of core templates standardised	Consistency in document production.
Reviews of documents and project deliverables ad hoc.	Core documents subject to peer review and formal inspections	Defects found and corrected much earlier and less effort on re-work. Actual number of defects now known
Informal estimation.	Defined approach with COSMIC based spreadsheet tool to calculate estimates.	More accurate estimating being carried out.

How was overall efficiency improved?



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Before Prism	After Prism	How this improved efficiency
No Function Point counting used.	Training complete and work progressing on use of counts on selected projects.	Selected staff performing counts at an early stage in the projects.
Silo's with no real 'team' working together to a single goal.	Regular communication more willingness to look at things from another's perspective.	Easier attainment of project goals.
Prince 2 used by some Project Managers but not mandated.	Prince 2 aligned with the Software Development Life Cycle and mandated for all projects.	Improved governance of projects.
Immaturity of those working in software development which impacted how they approached their tasks.	More experienced and confident staff able to work more efficiently with a greater awareness of 'the bigger picture'.	More effective communication with the customer and internal departments.

Unexpected results and benefits



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- Visible change in the attitudes of both Staff and Management.
 - They both have a better appreciation of their respective roles and responsibilities within the Organisation.
 - People are happier as a result
- It was not always the people expected who rose to the challenges presented by the change programme.



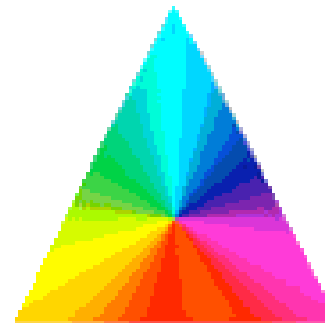
What next?



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- The success of this programme has given Serco Technology the momentum to continue with a new programme of work - PRISM 2 started in late 2007.



PRISM 2

PRISM 2 - Objectives



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- To attain ISO 20000:2005 IT Service Management certification
 - To align IT services with the current and future needs of the business and its customers
 - To demonstrate to customers that a recognised certificate has been achieved for Service Management
 - To reduce the long term cost of service provision
 - To improve the quality of the IT services delivered



PRISM 2 – THE APPROACH



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- In light of experience a similar approach has been adopted for these new activities:
 - ITSM metrics being established
 - An initial assessment of the Service Delivery and Service Support areas has been carried out
 - The assessment results have been used to focus on the areas of improvement
 - Similar work streams have been set up with individual metrics being established
 - A Communications stream will get the message out as work progresses
 - Visible Management commitment at the Steering Group meetings will continue

Why change a winning formula!

Conclusions



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- Whatever approach you select there are key factors that will help you to succeed:
 - Identify 'Champion(s)' who will fight to see it through.
 - Hold regular meetings to applaud success & resolve issues.
 - Have a realistic timeframe.
 - Identify 'Quick Wins'.
 - Show progress towards your goals.
 - Focus on Cultural Change as part of the initiative.

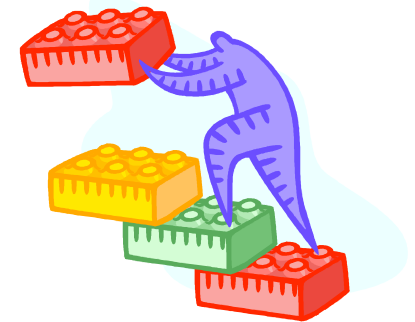
Recommendations



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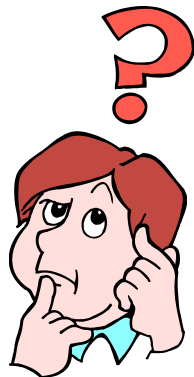
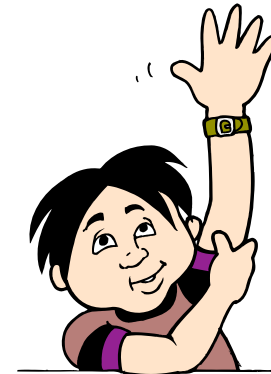


- Consider best practice rather than a specific model in the beginning
- Many of the fundamental building blocks will be the same regardless of model
- Get the staff who will be using the processes to develop them
- Make sure you have visible management commitment, our Sponsor was very much part of the process and staff were more committed as a result





Any Questions?



Contact Information



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