

Practice makes perfect

Simulation games to increase the return-on-investment of ITIL training

By Paul Wilkinson, GamingWorks*

In an effort to improve the performance of IT service delivery many IT organizations are turning to ITIL as a solution. However the reality of the last 10 years, certainly in Europe, has been that the hoped for service improvements have been difficult to achieve. 'People' are generally the biggest barrier to achieving sustained results.

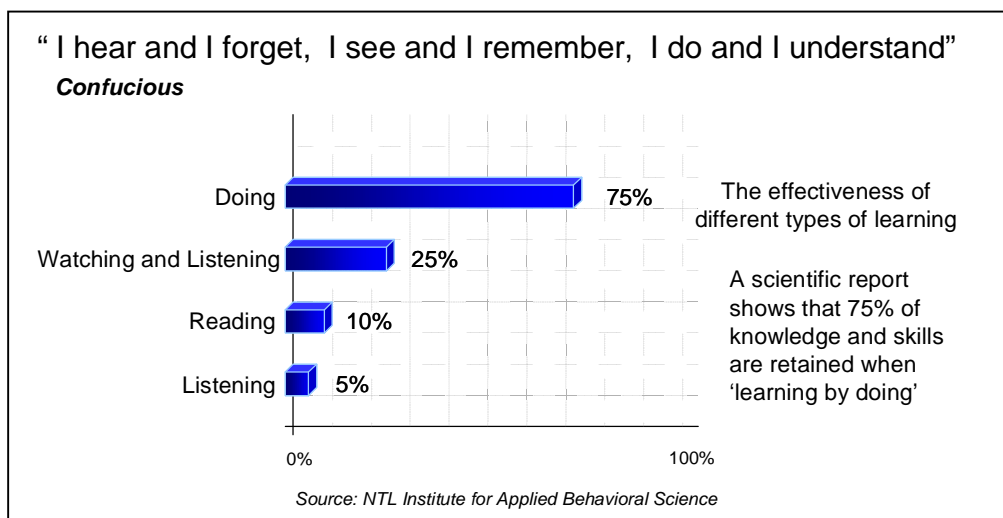
"Neither strategy nor measurement alone drives change. It is people and, more importantly, a sense of purpose that drives change. Most methodologies do not address the "soft" factors of performance management." Gartner (Characteristics of High Performing Organizations)

This article explains how Simulation games help to improve the chance of lasting IT service improvement results and create higher performing IT organizations.

Traditionally IT organizations send their staff on ITIL training, such as ITIL Foundations and ITIL Service manager training, hoping this will give staff the knowledge necessary for effectively deploying ITIL best practices. The principal focus of much of this type of traditional classroom training is ITIL theory. This type of training gives a solid basis and is supported by examination and certification to ensure people understand the theory. A characteristic of this level of training is that it imparts large amounts of 'Information'. However, Information is not 'Knowledge'. Knowledge is based upon 'experience'.

Let me give an example of what I mean. You can give a trainee pilot hours of classroom training and theory which the trainee can demonstrate their understanding of, by passing exams. But without simulation training to experience the theory in action, to translate the information into real knowledge the Pilot is unable to fly the plane. The same applies to ITIL theory, we can sit in classroom training and pass an ITIL foundations exam but it doesn't mean we have the knowledge to deploy and manage ITIL processes in a real, live environment.

Simulation games such as 'Apollo 13 – An ITSM case experience', 'Control-IT', and 'McKinley Airport' help translate ITIL or MOF theory into real knowledge and thereby assist organizations in effectively deploying ITIL processes to achieve real, lasting results.



* GamingWorks is the developer of the simulation game 'Apollo 13 – An ITSM case experience'

Another important element of a simulation game is that it can be applied to realize a range of different Learning objectives for different target groups within an organization. For example a simulation game can be used to:

- Learn ITIL theory
- Show the effects of Process integration and process dependencies
- Show how good processes improve performance and bad processes cause failures, high costs, and dissatisfied customers
- Teach people how to analyze and improve a process
- Let people become a process manager and allow them to manage people in a simulated environment.
- Experience the importance of working together as teams as opposed to individuals in 'silos' (organizational units)
- Show the measurable effects of improvements in terms of increased performance (within the simulated environment) for example "we halved the incident resolution time", 'We lowered costs by 30% by structuring our work and removing failures and wastage'.
- Learn about leadership

A simulation game is a powerful learning instrument. However it is important to know what learning objective you want to achieve by applying it, what type of behavioral change you want to bring about.

What are some of the key problems encountered when implementing ITIL? And can simulations help resolve these?

- § Lack of insight into the real pain areas that need resolving.
- § Lack of prioritization of improvement initiatives. Which initiatives will relieve pain and deliver the most tangible results.
- § Unclear goals of improvement initiatives – 'when is this initiative a success?'
- § Inability to measure and demonstrate success.
- § Lack of communication, effective 2-way communication; communication about the improvement initiative; about 'what it is going to mean'; about 'how we now need to work'; about managing all stakeholder expectations.
- § Lack of a shared perception over the real need, the real aim and the consequences if improvements are not realized.
- § Lack of Involvement and active participation by those who need to improve.
- § Procedures are a goal in themselves and not seen as an agreement between two parties, with inputs, outputs, tasks, roles, responsibilities and dependencies defined and accepted.
- § No real commitment at all levels. There being a difference between commitment and involvement.
- § Lack of ownership for the improvements, coupled with a lack of leadership. Leading, motivating and making change happen and stick.

Many of these symptoms are caused by lack of practical knowledge about applying processes. There is a lot of theoretical knowledge. Simulations help to translate the theory into practice and allow participants to apply what they have learnt. Traditional types of ITIL classroom training are primarily focussed on ensuring that theory is learned. **'Learning-by-doing'** is performed back in the real environment where there is no teacher to help reflect on how the theory was applied and what the consequences were. *In a Simulated environment course attendees not only get to put the theory into practice, but also to reflect on the results and measured outcomes of their choices, and facilitated by an experienced game leader, they decide upon and implement improvements. Each round then reveals the concrete results of improvements.* Making real process improvements, working together, decision-making, and leadership. These types of behavior and skills are needed. A Simulation lets participants see and experience the impact of their behavior. It gives immediate and direct feedback.

In normal classroom training delegates 'nod' and say they 'understand' the theory and its use, in a simulation they experience and feel the pain and the exhilaration of applying the theory. The Effects of simulations speak for themselves. These are the findings of 1000's of participants in our simulation game.

- **Understood the need for reporting** to gain insight into pain areas and process bottlenecks that needed improving.
- **Recognized the importance** of a logging tool for enabling decision making, and only registering what is needed for managing the workflow and providing reports.
- **Experienced the benefit** of the relationship between Incident management and Problem management in reducing costs and improving resolution rates and times.
- **Felt the impact** of effective and ineffective leadership in ensuring process success.
- **Got the Message** – bought into the need for both ITIL and the need for managing process improvement initiatives.
- **Felt the need** for clear role definitions and the need to be proactive.
- **Felt the pain** of poor priority and escalation mechanisms
- **Became aware** of own role in designing improvements and of sticking to agreed procedures.
- **Felt the consequences and frustration** of not sticking to agreed practices.
- **Understood Process design and improvement approach** - It doesn't need to be so difficult. Within a simulation teams learnt to analyse, prioritize and improve their own process and saw the immediate effects on performance.
- **Operated across boundaries.** The Apollo instrument makes people interactive, makes you act "Out of Silos".
- **Felt and Understood** the need for good team working.
- **Had fun**, in a constructive, productive session that helped with team Building.
- **Saw the importance** of the Processes in achieving results.
- **Recognized dependencies** between different roles and between different processes.
- **Felt how their own work became less stressful and chaotic** when the processes were working properly.
- **Experienced** the impact of using ITIL as a management & control instrument for realizing performance improvements and demonstrating control.

These results clearly show how the information became knowledge. Experience and understanding was gained and insight into why their own initiatives were not succeeding.

In the simulated environment participants get to put the ITIL theory into practice. They must design and use their own processes and are confronted with the impact of poor process design and poor decision-making. Between each simulation round they have the chance to improve their processes. Working as a team they analyse their performance and identify and prioritize improvements. At the end of each round they produce management reports, which clearly identify the results of improvements. Participants went on to use their newfound knowledge into making sustainable improvements.

Apollo 13 session reflections

This document contains the consolidated feedback from 5 Apollo 13 sessions held between 5/2/2006 & 5/5/2006. This feedback was captured on the evaluation forms for the Apollo 13 workshop, and the 'learning worksheets' filled in by the course attendees at the end of each session.

All attendees were asked to record on the 'learning worksheets' their own individual learning points as well as what they consider to be aspects that they have seen, learnt and experienced that can be taken onboard in their own organization.

What did you learn in this Simulation exercise?

The following list identifies the key learning points from the completed 'learning worksheets'. The number in the right hand column represents the amount of responses for the corresponding learning point in column 1.

Learning points	Number of responses
1. Clearly defined roles and responsibilities (and objectives) and communicate these. Everyone must understand the roles (and their role). We are each part of the whole, everyone serves an equally important role, objectives cannot be achieved without the contribution of all, consequences of people not performing agreed roles and responsibilities kills the process. Don't let people waiver from process.	19
2. Need to clearly define requirements for prioritization & escalation of incidents and changes. Deadlines need to be key to priority. Need to know when and how to escalate. The need to develop a priority & escalation mechanism together with all internal groups and with the Business and Users. Need for visibility of high risk/important issues.	17
3. Process improvement is ongoing; it is not a one-time implementation project. There will be mistakes and we should learn from them. We need to test procedures, test failures, and determine where the bottlenecks are and how to fix them. We must Plan, implement, and review processes to create successful outcomes. We must capture and identify problems in processes now, and as we deploy them. We need to capture these early to help identify areas of improvement. ITIL is a critical service improvement process and should be implemented as a continual improvement process that will have to be continually evaluated and adjustments made as necessary. ROI on processes is not immediate, it will take time to see return. We need to be prepared for the fact, that when a new change is introduced into a process it may disrupt the improvements already realized. Implementing a process is a disruption and may cause chaos and confusion.	14
4. Processes add value. We need defined process flows, structured, standardized & documented processes that are tailored to fit our organizational needs. Implementation planning is critical. All groups need to be involved in designing and agreeing processes.	13
5. A Configuration Management Data Base (CMDB) is critical for success, understanding what our CI's are, where they are and how they fit together. The CMDB helps to relay information, helps understanding relationships within the infrastructure and within our company (Support groups and responsibilities). A CMDB and other tools, such as a Known Error database helps with communication between groups and helps ensure success. A CMDB needs to be widely available throughout IT. Maintaining an updated database and purging antiquated CMDB items facilitates process management. There is a need for an agreed upon way of managing configuration data.	12
6. Planning and anticipating workload helps to realize success. There is a need for pro-active planning. There must be a conscious effort to be pro-active and not just reactive. Proactive solutions, based on previous experience, help to save time and money. Better organization improves productivity.	11

7. The importance of managing Known Errors and solutions so that they can be reused. Document resolutions of problems and use them again to resolve further incidents. Use of Service Desk to solve more incidents. The Known Error and workaround database is important and must be maintained. The knowledge must be transferred in order to free up specialists for continued improvement and higher value activities. Specialists need to filter out repetitive tasks. The transfer of knowledge is necessary in head and in tool, because the staff turnover means anything in the head is lost when staff moves. Let specialists focus on value added tasks.	11
8. Teamwork is important, we must use all resources, and our organization should work more as a team to solve problems more efficiently. We should form work groups to solve problems (proactively) and then transfer them. This needs to be organized teamwork that is managed. We need to rely on critical groups to find a resolution (Problem teams) and pass this knowledge on. These groups must take ownership and feel the responsibility for doing this.	9
9. Have managers manage. There has to be buy-in from the top, management must be totally supportive in providing resources. Leadership is needed. Managers must 'walk the talk'.	8
10. Clear understanding of Service Level Agreements (SLA's). Incident reporting (metrics) what do we want and need? We need to measure process performance. Customer satisfaction is important. What do our Customers expect? Reporting tools and ability to track process and performance are vital so that we can show how well we have done and so that management can take action. Management needs information to do their job (get resources, manage cost, make decisions).	6
11. Communication is key to being productive and proactive. Status communication back to customer is invaluable in maintaining customer satisfaction. Predefined communication channels facilitate effective communication between IT groups and from IT to the Customer (Business) and the User. Communication between all support groups is necessary to ensure end-to-end management of services and quality.	5
12. Have a documented SOP for handling incidents that is backed by management and enforced. Ensure event (Incident management) process consistency. Tracking incidents and relating the tracking to priority & escalation mechanisms. We need clear routing and tracking.	4
13. Training is a critical component, without it all a specialist will do is put out fires, and Help desk staff will not be effective. We must take time to train. The more people understanding the process and what is expected of them the smoother things will work. We should use any processes we design as part of the training.	4
14. Change control helps move things into production better. There is a need for a forward change log so that we can plan resources. We should execute a Change management process with authorization and testing. We should evaluate both the change process and changes so that we can see what impact changes have on our resources and how effective our changes are.	3
15. Setting up a procedure for problem resolution. We should delegate a problem manager for high impact incidents – needs to be able to understand the details. The problem manager should manage and direct problem teams.	3
16. Make more use of vendors and suppliers when necessary. We have maintenance contracts. Do we use them?	2
17. Tracking of real time parameters aids in timely corrections and adjustments, there is a need to monitor systems and set thresholds.	2
18. Business must be open to change and understand how ITIL will help them. We need to identify what is important to the business so that we can say how ITIL will help.	2
19. Need to identify how IT staff will benefit from ITIL.	
20. Incident & problem management needs to be designed with the minimum necessary routes/approvals to expedite incident/problem resolution.	
21. The need for a better integration between incidents/Problems/Changes.	
22. We are already well down this path in our organization. We just need this exercise to re-enforce and assure ourselves that we are doing the right things and we need to continue refine and improve.	

23. Contingency planning is needed to ensure all mission critical applications and business processes can survive any unforeseen situation.	
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What can we use from this exercise in our daily work

The following list identifies the 'Top named' points raised by delegates during the plenary discussion round at the end of each session. In this round of discussion they are asked to name what they think is the most important aspect of 'process working' that they have seen and experienced and that they feel should be applied at their company. The number in Brackets () at the end of each point identifies the number of times this point was named:

1. Knowledge transfer to Service desk (CMDB, Known Error DB), this will free staff for other projects (Changes, planning). Capture knowledge in a Tool not just in people. Ensure knowledge is maintained and there is discipline about updating it. Sharing and "letting go" of knowledge is important. We feel that knowledge is power; we don't like to let go of it. Be proactive based upon previous experience, and transfer this knowledge. **(8)**
2. Clearly defined and communicated roles and responsibilities, and 'authority'. Empower people to carry these out, ensure ownership of roles and responsibilities and authority, each individual is important – If they understand their role and work together. Discipline is needed. **(6)**
3. Document processes to get people on same page, ensure the processes are repeatable & consistent. Couple this with testing, verification and review of processes and use the documented procedures for training, Documented procedures backed & enforced by management to ensure that discipline is maintained. Thoughtful design is needed (how should we do it? who should be involved? why? where do we begin? Which processes are needed? Which processes will add the most value to the business and our goals? Checking that they are working and are realizing the goals we desired). **(6)**
4. Continually evaluate process performance. See improvement needs as opportunities not as failures. We need to learn from mistakes. **(5)**
5. Need for better priority & escalation mechanisms, a standard mechanism across the company agreed at all levels. Escalation must be backed by management and enforced. **(5)**
6. Management control styles – "leadership", Buy-in from management, Following process requires discipline, also authority to ensure things get done. Do not waiver from process (total commitment & consequences for not following is needed). Need to ensure real buy-in to ITIL. There are concerns about this happening, many people say they see the need and the value but will not change or will be told to do other things that are more important. **(4)**
7. The capture and use of management metrics for steering. Metrics & real time steering information are needed. **(3)**
8. Better communication internal and external (status updates, pro-active, constraints, solutions, knowledge). **(3)**
9. Setting thresholds in systems management and tracking against thresholds to make timely, pro-active fixes. **(2)**
10. Understanding of SLA by ALL involved, and how what they do influences the SLA. **(2)**
11. More steering and control of the Change process. Right change, right time. Prioritize changes and change planning with business. User involvement in the change process, testing and acceptance and agreeing deadlines. **(2)**
12. Listening to, and not discounting expert advice.
13. Incidents must be driven by Customer priority and not political agendas.
14. Need for Disaster Recovery Plan.
15. Standardized logging of incidents and changes and what needs to be recorded for everybody that needs to be involved (carrying it out or managing it).
16. Test and Simulate the processes we design so people know what to do & where to go.
17. Purging old database information.
18. Cost & budgeting, drive out wasted costs
19. Cross functional problem teams
20. Work as a team, use all resources including supplier (check maintenance agreements)
21. Keep track of Customer satisfaction.
22. Business integration.

Points captured on the learning worksheets relating to improvement needs within their own company.

*The following table identifies **all** of the improvement suggestions captured on the 'learning worksheets'. These suggestions are clustered into 'people', 'process', 'technology' and 'steering'. These were the improvement suggestions that delegates felt should be applied at their own organization as part of the ITIL deployment initiative.*

Improvement area	Number Of responses
PEOPLE	
1. Teamwork is very important. We must be able to rely on others to do their part. A process is as strong as the weakest link. If people do not do what is expected and agreed the process will fail. We will fail. We must use teams (cross organizational boundaries); utilize key resources effectively, not just for fixing problems but also for transferring knowledge, including suppliers. We must ensure that we work as teams to resolve issues and incidents. We must ensure systemic problem teams. We need to ensure team building so that Silos will work together for a common goal.	8
2. Ensure that we all understand our roles and responsibilities (and Authority). We must ensure that everybody understands that everyone is important to the entire process. We must establish clear tasks and responsibilities and we must ensure everybody knows what these are and follows them.	7
3. Communicate within team and cross functionally to achieve the common goal. Ensure we have good lines of communication – horizontal and vertical. We need better communication for those that need to know. We need to listen and take advice from our experts, listen to their needs. We must show that it is 2-way communication; we must ensure that when we get a signal from the experts that they hear and see what is done with their suggestions.	7
4. Ensure proper training, right knowledge to right people. Pass knowledge horizontally and vertically, share knowledge. Train "CapCom" (Service Desk) to utilize solutions in their database. There must be time for training to take place.	5
5. Improve how we communicate status information to the business and users, also train business users to be more self sufficient where applicable and to communicate their real needs and priorities to us at the right time, in the right way.	4
6. Need for problem managers for high impact issues. Need to assign an incident manager to manage the incident management process. Ensure managers can and do manage.	3
7. Need for 'Leadership'. Management must have total buy-in if it is to be a success and must demonstrate commitment. (Management at all levels). Commitment is more than words; commitment must be seen in the form of actions. If commitment is not seen and believed then people will not stick to the designed processes and agreed ways of working.	2
8. Empower IT staff to form problem teams, use specialists to solve problems.	2
9. Keep manager in the loop. Ask manager what are responsibilities, priorities and timelines.	2
10. Make better use of vendors and suppliers in processes & projects. Ensure we make use of our supplier contracts, guarantees, pre-sales promises, and involvement in design of solutions.	

PROCESS	
1. Re-evaluate our processes for continuous improvement, refine processes over time. By identifying what works well and what doesn't we can improve efficiency, quality of work and Service Level Agreements (SLA's). We need to implement processes gradually. Do not add all processes at once. We must show that processes add value to the customer and to our own people. "What is in it for me?"	
2. Document processes and process flows; be more thorough in documenting and maintaining processes. Design processes together, involve those that need to do the process so that they are involved and committed and will take ownership for the processes.	8
3. Decide what should be a ticket or a change or a service request. Ensure we know how to 'route' incidents (and Service requests) and have good, documented and agreed routing mechanisms. Users need to go to the service desk first.	5
4. Keep coming back to task list and review (monitoring and tracking), improve our tracking. We need a good monitoring and tracking tool (in footprints) to track incidents, problems and changes. We need to be more thorough in documenting (updating status) for tracking purposes.	4
5. Learn the processes, train people in how to use the processes. Use process documentation in training. Use training to help understand process and roles. Use training to show commitment.	4
6. Simulate our processes when we design them, use this as part of training.	3
7. Ensure people are responsible for identifying enough details to help determine problems, systemic problem teams. Specify who handles what types of problems/issues in advance and ensure that they are allocated the responsibility, accountability and the time to do this.	3
8. Everybody must follow processes – discipline is needed. If people do not follow processes there must be some kind of visible consequence. Management must show and demonstrate that this is not acceptable.	2
9. Need for a forward change log so that we can plan resources and so that we and the business knows what is happening, when and who must be involved.	2
10. Set threshold parameters to track the approach of trouble, ensure that we can be more proactive in fixing problems before they happen and for signaling issues before they surprise us, also so that we can show the business the impact of all their requests and change plans.	
11. Be sure an incident or change is resolved and accepted by user before we close them.	
12. More careful consideration of new systems in light of supportability. We must ensure that the release of new systems takes into account (manageability, training, Known errors, CMDB information).	

TECHNOLOGY	
1. A system to capture incidents and identify trends (repeat incidents), A method to match trends with solutions. Capture knowledge in 'Tool' not in 'People', Capture Known errors in Footprints, We should document resolutions better for the service desk to assist future users, Knowledge transfer to Service desk to help resolve higher level incidents, Knowledge transfer across teams, Hand-over as much knowledge as possible to free up for more detailed work, Don't reinvent the wheel, pass along knowledge, utilize resources to build up company knowledge (in DB), update knowledge base for future use, documented knowledge sharing, create an effective database, better use of Known Errors at the service desk, better documentation of how something was fixed	24
2. Better database management, tidy up databases	2
3. Need for well documented systems in our CMDB, well maintained CMDB	2

STEERING	
1. Organize our priorities; agree our priority and escalation mechanisms. All departments must know how we will Prioritize tasks, they must know when and to whom they should escalate. We must standardize our priority mechanism across the company. The Business and users should be involved and informed of our priority and escalation mechanisms.	12
2. Have realistic implementation goals for all processes and do not create processes for process sake. We need to know what it is we want to get from ITIL. Set expectations with the business. Define Key Performance Indicators (KPI's) and make everybody aware of KPI's and SLA's. We should make use of SLAs to manage business expectations. We should identify what it is we want to get out of ITIL? Drive out wasted costs using ITIL?. Improve Customer satisfaction? Set expectations with the business and within IT. If we do not know when ITIL is successful then we cannot say that ITIL has helped us realize success?	9
3. Implement a good 'Management and control' system so that we can recognize and steer for the results we want to achieve. Individuals need to know what metrics they are responsible for helping to achieve, and understand how they contribute to organizational success. A scorecard will be a helpful tool for everybody. We need to define and agree good metrics. We need to plan the introduction and design of new processes so that they can realize the metrics. Metrics must be linked to business value and what the business expects from IT. We and the business need to know the goals to be achieved with ITIL.	6
4. Proactive vs Reactive. Look to the future planning for business needs, issues and deadlines, Help prevent bottlenecks by being forward looking (what is coming down the road), Plan ahead, Planning ahead for future is key, planning projects, planning scarce resources and planning to ensure that the support organization is ready and capable.	6
5. Clear visibility of open issues. We need to stay on top of open issues (open changes, incidents, priorities, capacity growth and potential problems) as well as issues in our processes. We need to make this information available to management so that decisions can be taken and resources allocated accordingly (Priority & escalation).	3
6. Keep track of customer satisfaction, keep the user informed during process improvement, ask for input, know the user needs.	3