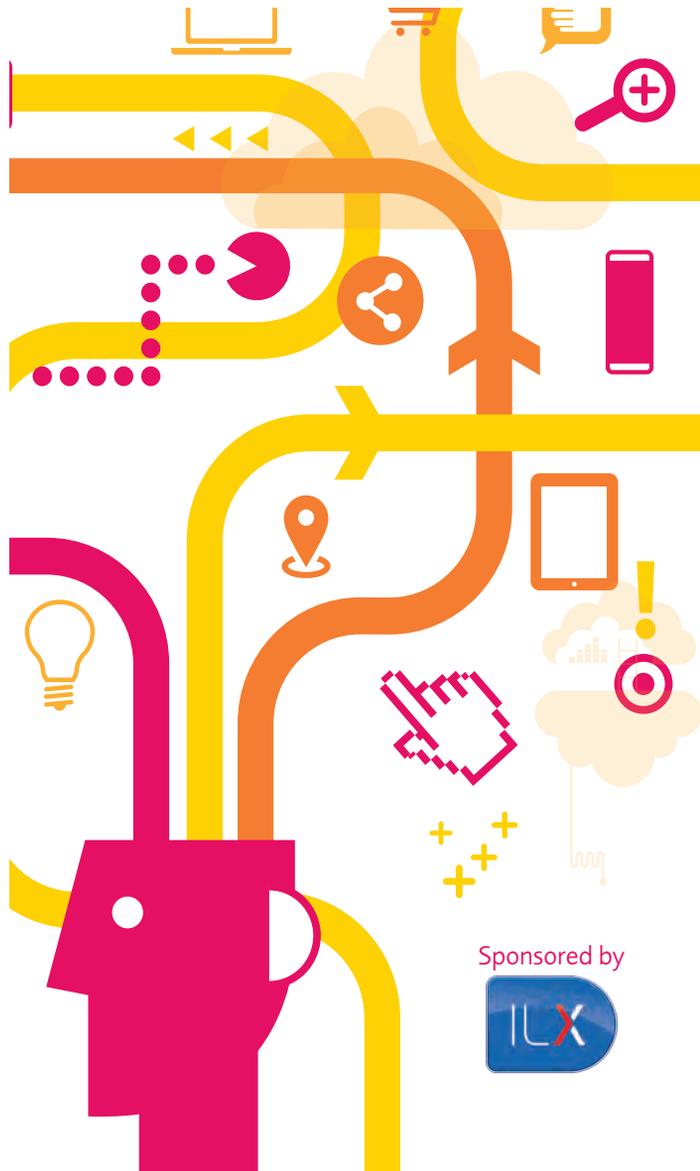


Introduction to Gamification



Sponsored by



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Foreword

How do you motivate and engage a team which is glued to their smartphones? That was the question we set out to answer when exploring the subject of gamification.

With its origins in the computer games industry, game thinking, or rewarding 'players' to solve problems, has become more widely used across different sectors. However, its use within the project management community is still in its infancy.

Through this guide we want to raise awareness of this exciting new trend, highlight the benefits – the effect of incentives such as points for 'players' and badges to showcase achievements – and its application to everyday projects.

If we can make you think of how you could incentivise your team, through gamification, perhaps through their smartphone – then we will consider this project a success.

APM Thames Valley study tour team

ILX Group is delighted to support this brand new series of APM publications. We firmly believe that gamification is an emerging trend that will add real value to the project management profession and, with the help of this guide, more users will be able to benefit.

We have been supporters of gamification for some time now and have developed a number of products to support project professionals in their quest for a professional qualification.

As a leading educational provider, ILX Group recognised the potential benefits of game play very early in its development. In fact, we have been actively using games in our eLearning and classroom courses for some years. The effect has been significant, bringing together learners in a way which wouldn't be achievable using more traditional educational techniques.

ILX Group

Introduction

The concept of gamification and its techniques in non-gaming environments is a fast emerging practice in business. Though in its infancy, the dynamics and techniques of gamification have been found to be easily transferrable from their gaming software origins into the world of commerce.

The use of gamification tools and methods has the potential to benefit project managers from all industries because of their fundamental potential to shape and influence behaviour. It is important for project professionals to fully understand the concept, how it could be applied to projects and the associated benefits or risks, if its transition to project management is to be successful.



This guide builds on the Association for Project Management (APM) Thames Valley branch study tour team's report on gamification and introduces the concept as a tool for project management. The team carried out a yearlong study into this emerging practice, undertook research with industry experts and tested the theories themselves. The report, published in 2012 (APM, 2012), detailed recommendations on utilising gamification within project management.

This guide has been designed to offer project managers an introduction to gamification and provide an insight into its origins, possible uses and benefits within the profession.

What is gamification?

Gamification originates from the computer games industry and is the use of game thinking and game mechanics in a non-game context in order to engage users, solve problems and drive behaviour. When used in a business environment, it is the

process of integrating game dynamics into a website, business service, online community, content portal or marketing campaign to initiate participation and promote engagement. On a basic level gamification techniques tap into and influence peoples' natural desires for competition, achievement, recognition and self-expression.

Software companies introduced the same kind of concepts into work life that were being developed within their games. They found that their employees responded positively to being awarded 'badges' dependent on their performance or level of effort. Gamification appears to be making the leap from game-play to the workplace at a great pace. A growing number of organisations are adopting gaming techniques and game-style rewards in order to motivate and incentivise employees and customers (Gartner, 2011).

Within the last three years, gamification has started making the transition into mainstream industry as a tool used to increase the engagement and motivation of a workforce. This transition has been facilitated by the increased availability of appropriate technology and connectivity, such as smartphones and tablets, which can support a gamification environment.

Further detail on recognition and reward can be found in the Game mechanics section on page 13.

Who uses gamification?

The basic principles of gamification have existed for over a decade in areas such as internet consumer engagement applications (apps), frequent flyer cards, loyalty schemes and healthcare fitness programmes. Many companies have introduced gamified schemes in order to increase customer



engagement or more recently employee engagement. These schemes motivate the customer or user to continue buying or using a product or engage the user's interest and increase motivation.

Companies including Starbucks, Nike, eBay, Salesforce and Badgeville are among the organisations which have found success with the concept of employing game-like activities to improve business and customer interaction. Lee Sheldon, a gamer, game designer and assistant professor at Indiana University, USA, believes that managers may have to rethink how best to engage the next generation entering the mainstream workforce (Sheldon, 2010). However, the benefits of gamification are not necessarily confined to the next generation; they are equally applicable to a person of any age, gender or background.

Reviewing education and the courses establishments offer is a good indicator of how gamification is viewed and being utilised in business. Several UK and US universities offer courses encompassing gamification, ranging from one-off courses to a module on a master's degree.



Gamification theory

When defining the term gamification, there are a number of different interpretations of the method, situations and context in which gamification should or could be implemented. Some people refer only to gamification as used within its originating software industry. Others argue that gamification can be used as a sales and marketing tool to capture the interaction of an online customer base. Increasingly, however, there are a number of references to gamification as a project management or employee engagement tool.

Put at its simplest, gamification is the use of game design elements, game thinking and game mechanics to enhance non-game contexts.

This is the main function that gamification could provide – enhancing a situation through the use of gaming mechanics, the benefits of which include:

- increased engagement;
- higher motivation levels;
- increased interaction with the user (customer or employee);
- greater loyalty.

This is important in project management terms, as one of a project manager's main objectives should be to increase the engagement and motivation within their team, in order to improve performance and strengthen working relationships. These, in turn, result in a stronger and more effective project team and performance.

Within project management there are many different models to help us understand how people work. As managers of people it is very important to have a good knowledge of these, how best to use them, and how your behaviour impacts on the people you work with.

In the report, the APM study group considered some popular behavioural models and applied gamification to understand the outcomes, including Maslow's Hierarchy

of Needs which identified that humans have a number of needs that we aim to fulfil during our lives and gamification could be utilised to promote and achieve the top three levels. Dan Pink's *Drive: the surprising truth about what motivates us* (Pink, 2011) correlates the hierarchy of needs with the basic principles of gamification and explains that the deficiency needs in the model are satisfied by a long-term interaction with the gamification method, where people can attain status, social cohesion and reputation. The reason gamification is so successful is due to the rewards provided in the self-actualisation pinnacle of the Maslow model. By playing the same 'game' social cohesion is created, and by using rewards and feedback, self-esteem and a sense of achievement are promoted.

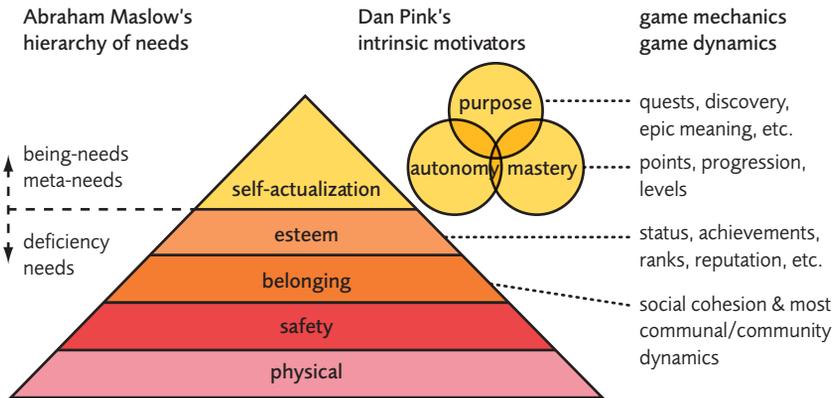


Figure 1 Maslow/Pink model – created by Michael Wu PhD, chief scientist, Lithium Technology (Wu, 2011)

The APM Thames Valley branch study tour undertook a survey of 95 project professionals as part of its research and the results support the Maslow/Pink model.



Respondents were asked to describe their own personal motivating factors. The majority of peoples' motivating factors fell within the need for esteem and self-actualisation (APM, 2012).



The seven deadly sins have been applied to gamification by Wang (2011) where for example gluttony relates to people with the desire to accumulate, acquire and contribute; greed taps in to the desire for power and status, and envy fuels a need to desire what others have (relating to the success of others and transparency).

Gamification and neural activity

While trying to gain an understanding of the behaviours and expected responses of an individual or team, it can also be important to consider what is happening in the brain that affects people's behaviour. There has been significant study into the neural activity inside the brain when a person is undertaking exciting and addictive tasks and while there has been no specific study into the impact of gamification within the brain, it could be assumed that the effect is similar to that of gaming, gambling and other competitive activities which release specific chemicals to create feelings of excitement, euphoria and pleasure. It has even been hypothesised that gamification aims to activate the brain's natural reward system through the release of a chemical known as dopamine, giving a feeling of satisfaction and happiness. By tapping into a person's neural system and rewarding them, this activation should then fuel the motivation to continue and become further engaged in the activity.

Why are people interested in gamification?

Gamification taps into the basic needs and desires of individuals; impulses which often revolve around competition, status and achievement, and in some cases even a form of self-expression. These attributes are embodied in everyone, at differing

degrees, and it is this which gives gamification the potential to be such an effective tool within the project team and wider workplace.

Software provider Bunchball has described the attraction and pull of gamification in a very illustrative way: two people playing monopoly every day for a week would get bored very quickly, but if you add in another element – capturing statistics – it starts to take on another dimension. How many times each person won, which properties were most profitable, how much money each player accumulated; all these elements create another level to the game (Bunchball, 2010). The statistics become the game and people want to outplay each other.

It is the excitement generated by the collection of a number of statistics, and the use of those statistics, that can encourage people to perform tasks they would ordinarily consider uninteresting, repetitive or strenuous. It is this application that has created a high level of interest within the business world.



Game mechanics

There are four main areas under the gamification banner. The understanding and correct application of these four areas together produce an environment in which engagement, loyalty and motivation are able to flourish.

The four areas are:

- points – something for 'players' to earn;
- rewards – something for 'players' to spend their earned points on;
- badges – something to show peers the achievements 'players' have unlocked;
- leader boards – a method of gaining some real-time feedback which is visible to everyone.

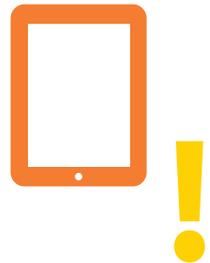
It is important to understand the distinctions between these areas before introducing gamification within a project team, the details of which are explored below.

Points

Points provide the main method of currency within a gamified system. In order to earn points, team members have to complete tasks. One of the reasons gamification works so well is that the natural human psyche urges people to collect resources - the more resources a person has, the greater their status.

Points can be a great way to virtually move up in an organisation and demonstrate to other people within the team and organisation that a person is remaining on track (Mashable.com, 2011).

Points work as a highly-effective motivator and can be used to reward users, with different categories of points being used to drive different behaviours within the same site or application. These are not only used as status indicators, in a gamified



environment they can be used to 'buy' items or services as determined by the project manager or organisation.

In project management terms, earning points can also be a good way for project managers to track team performance or direct behaviours. With a points system, project managers have the opportunity to incentivise tasks according to the importance of specific activities at any given time in a project, and to recognise good performance within the team. By monitoring the points earned within the team, project managers have an important tool which also acts as an early warning system in identifying and resolving any poor performance or other issues.

Rewards

When a 'player' earns points and completes challenges in a game there is a reward and a reason for having done the task. This should also be true within the workplace. Purist gamification theory states that, as in a game, the reward should be non-monetary; the earning of points is a reward in itself. However, in the workplace, some organisations set up reward portals from which employees can purchase a variety of rewards ranging from:

- team dinner;
- vouchers for a family day out;
- vouchers for high street stores;
- lunch with directors;
- company private venture funding;
- a role on a top secret future project.

To increase the chances of people continuing to wish to spend their points, and therefore making them more likely to perform tasks and earn further points, it is very important that the rewards available are regularly refreshed to include new opportunities.

Badges

A key human desire that impacts on the workplace is the desire to show competency. Usually the only place to do this is through the standard organisational hierarchy, however gamification provides a method for displaying a person's competencies so that everyone is able to recognise an individual's ability. It works in a similar way to the armed forces, where badges showing training undertaken, competency and responsibility are displayed on uniforms; 'players' within gamification can also earn badges which are seen by the whole organisation and peer groups.



Badges symbolise an individual's ability to perform and can be permanently attached to a player's profile, serving as a visible record of achievement (Playgen.com, 2012). They are often seen as long-term achievements, and are a determining factor for maintaining the challenge within a gaming system.



In a project management environment, challenges could be based on tracking important project tasks and rewarding the team, or individuals within the team, for reaching those milestones with points, badges and recognition (Bunchball, 2010).

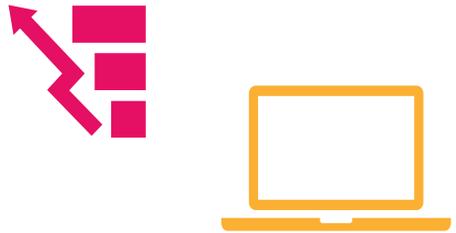
Leader boards

The recognition that follows the collection of points and badges forms an important component of gamification. Such recognition can be within the project team, peer group or could extend to senior management. One method of achieving this recognition is through leader boards. By accumulating points or recognition and seeing these on a leader board, individuals can advance 'through the ranks' and be recognised by their teammates (Mashable.com, 2010).

This public display of achievement can help gentle, healthy workplace competition

and aid team development as it feeds the human social need to compare oneself with friends and peers as well as experts alike.

In a workplace that utilises gamification, being at the top of a leader board feeds an individual's need for recognition, social status and self-worth. Being lower down on the board has the effect of encouraging people to improve their placing. It is this element of competition that drives people, satisfies their need for challenge and reward, and motivates the workforce through target setting.



Equally, instant feedback can create a sense of achievement for those motivated by progression, and not external competition. Here, the leader board can achieve results where a participant sees their progress over time.

To some members of the team, the element of social recognition may be more important than the tangible rewards. Individuals looking for career development may benefit more from the recognition gained through gamification. Colleagues are also able to track each other's progress and publicly recognise well-executed tasks, while managers have the opportunity to look at a team's performance and provide praise and useful feedback (Mashable.com, 2011).

Gamification in the workplace

Some team members embrace change easily, while others may be a little more reluctant to accept something new. The best way of introducing a new idea is to start with something that is easy to use, which is entertaining and fun. This generates a level of interest in people that will make them want to join and compete. The implementation must enable people to see that the system is a positive, rewarding step forward, and one which will have a positive impact on daily working life. It is also important to have a visible longer-term plan in terms of profiling and future career development.

An important consideration in facilitating the acceptance of gamification is the leadership the project manager demonstrates towards the method. If the project manager can communicate convincingly that the experience will be a rewarding one, which challenges and invigorates individuals and the team as a whole, the experience has a higher chance of being successful. There must be a clear observable benefit to both the organisation and the individual taking part, and it is the implementing project manager's responsibility to convey this in order to foster initial engagement. Once the team has bought in to the concept and participants have reached a critical mass, a sustained level of gamification can be achieved.



How could gamification be applied to project management?

Projects and games share some noticeable traits. Games are usually driven by coherent goals, well-defined player roles and meaningful metrics in order to provide feedback on progression. Similarly, well-managed projects are guided by cogent objectives, team members have delineated roles and intelligent metrics that are employed to measure progress. The significant difference between the two lies in gaming feedback, which is transparent, instantaneous and public (Project Management Hut, 2011).



Gamification encompasses many elements that could be utilised successfully within a project management environment to create fun, motivate staff and increase productivity within project teams.

The principles of gamification are based around the ability to help create and sustain relationships between the

user (employee) and a product (the project). The use of engaging and entertaining games/activities as an addition to the working environment are designed to resonate and entice both gamers and those not interested in typical gaming practices (Playgen.com, 2012).

By engaging multiple users in a product, a community is created. Allowing interaction within the community creates a societal attraction – one of the factors that encourage a user to return (Bacon, 2012). Gamification has the potential to create a sense of community within a project or organisation, which in turn should inspire engaged users to contribute at a much higher level due to camaraderie and an increased sense of loyalty.

Individual project team members would be encouraged by the accountable goals and the clear recognition and reward policy. Gamification could be an important tool to assist the project manager in understanding what the team has to do, as well as enabling the team to fully understand the manager's expectations and requirements.

Gamification in itself does not add any measurable value to a project or organisation. It is in peoples' enhanced commitment and engagement with a project and through the development of key emotions such as loyalty, pride, a strong work ethic and willingness to win, that the real benefits of gaming can be understood.

Adopting gamification techniques

The use of gamification in the workplace should only be implemented after careful consideration of the possible implications. Gamification within a working environment is very different to gamification with a consumer, online or internet community. It is therefore necessary to fully understand the positives and negatives of the gamification process, and it is particularly important to realise that it is not a solution in itself, but a tool that can have both positive and negative effects on the workforce.

The benefits of gamification techniques

In the workplace, gamification could have a positive impact on individuals and project teams in a number of ways including:

- higher motivation levels;
- greater productivity levels;
- an increase in feelings of shared goals;
- increased acceptance of repetitive, less exciting tasks;
- greater individual and team achievements;
- providing a timely understanding of team performance;
- data collection that can assist project managers in understanding the skills base within the project team;
- stronger commitment to the project/organisation;
- greater transparency;
- clearer accountability;
- increased staff retention rates;
- immediate and ongoing feedback.



The risks of gamification techniques

Introducing new systems into an organisation could also have a negative impact. Possible risks include:

- alienating some members of the project team/organisation;
- the system may not work for all areas and levels of the team;
- where there are winners there are losers – what effect will this have on the team?
- some employees may react negatively to being measured;
- applying gamification to every aspect of the workplace may cause a lack of focus and prevent interest in the engaging aspects it can provide;
- points and badges may become less exclusive as time goes on, leading to a lack of interest in the initiative;
- work could be de-valued if the behaviours enhanced are not well considered and not aligned to desired work behaviours;
- healthy competition could turn into destructive competition, creating divides and preventing a team culture;
- cheating could lead to demotivation and dissatisfaction;
- gamification may alienate older members of the team who are unsure and unfamiliar with the terminology (this could apply equally to any team member regardless of their age).

Gamification good practice

Experts agree on some fundamental rules for the successful implementation of gamification which specify that user participation should be voluntary and the system should be adapted to the organisation. A variety of levels should be introduced which increase in difficulty and the feedback and data generated from the platform should be used to improve the platform.

The most common pitfalls identified by experts in conversations with the APM study group were:

- tools not fitted to users;
- lack of a cheat-proof concept;
- lack of monitoring;
- restricted usability;
- absence of intrinsic meaning and rewards;
- social impact not accounted for;
- no increasing challenge.

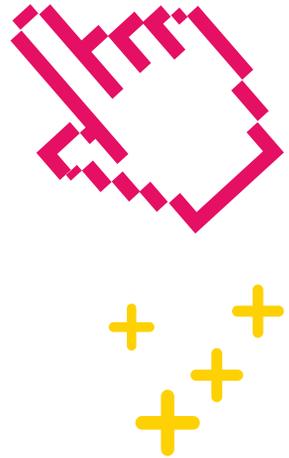
It is also key to remember that gamification is not a solution to fundamental issues within a project team or organisation. Where issues are present, these would need to be considered and addressed before the introduction of the gamification tool in order for it to stand a chance of success. Successful gamification lies in a carefully planned and organised setting, reviewed and adapted according to feedback from users.

The APM Thames Valley branch study tour research led the group to construct these good practice dos and don'ts for gamification in project management.



Do . . .

- Align the system with your company vision, identity and brand.
- Integrate the gamification into the brand and the look and feel of the company.
- Identify the key existing behaviours you wish to enhance or change.
- Design the system to your company's specific needs.
- Collect data and use it as feedback to improve the system.
- Provide data to users to enable them to analyse their own performance.
- Keep it simple – the fewer clicks the better.
- Make it enjoyable – employees will buy into it more easily if it is fun.
- Trial your system with a user group.
- Make it optional and trust you will attract more users – having to use the system will have a negative effect on those who are less interested in taking part.
- Ensure the badge is worth earning through either social or professional recognition.
- Ensure the points are worth getting by making it a challenge to earn them.
- Make it shareable – to entice sharing of information between users.
- Contextualise the system – it makes it meaningful.
- Be transparent about how the system works.
- Look into how the system could be broken – to highlight unintended consequences.
- Periodically review the points system – users will lose interest if the top of the board is unreachable (or too easy).



Don't . . .

- Trust the system can look after itself – a system that is not adapted will lose users.
- Go for really low-tech systems – the technology is there to help administer and adapt the system.
- Assume that the system will take off by itself – project managers need to work to sell the concept.
- Use the term gamification with those organisational members who may have problems with the gaming concept – consider using 'incentive' or 'motivational and engagement tool' instead.
- Make the system inaccessible for people – ensure all users have appropriate access through the right level of technology.
- Increase admin – ensure it either saves time or the enjoyment outweighs the number of clicks.
- Alienate groups within the potential user base – identify what motivates them and work it into the model.
- Reward undesirable behaviours – test the system for any loopholes.
- Get disheartened – all new systems have teething problems and take time to become established and accepted.
- Let the system get outdated – a good system is always improving.
- Punish lower performers.



Gamification case studies

Cranfield University

Cranfield uses gamification in a complex, highly interactive project simulation to improve project professionals' performance in a protective environment that allows them to subsequently analyse their performance.

Participants have to not only manage project planning and control, but also manage stakeholders. Project simulations that can be used include managing a mining project in South America, building a football stadium in the UK and merging two banks.

The simulation allows users to earn virtual money and the performance management extends to losing your job due to non-performance. The simulations force users to work under the pressure of unforeseen events and manage projects under high levels of stress. Most students learn from the opportunity to try and commit errors in a simulated/safe environment.



The Cranfield simulation and use of gamification creates an instant appreciation of the complexity of projects, and human interaction. The feedback that is generated allows participants to modify their behaviour and their actions back in the real-time world, but it is easy to make the jump to be able to see how the same data and feedback could help in a classic project in a live environment.

giffgaff

giffgaff is a UK mobile phone network that operates a mobile virtual network using O2's infrastructure. It invites its members to participate in some aspects of its operation, such as sales, marketing and member (customer) service with members being rewarded through 'payback' remuneration. giffgaff is a young, entrepreneurial company with a dynamic atmosphere and impressive growth curve. The community is engaged in projects that develop concepts generated from the ideas board, including:

- re-launching its knowledge base;
- payback for members and kudos points for involvement in projects;
- development of the company 'route master' – a road map of projects that is shared visually with staff and members;
- managing giffgaff's re-branding project with the community as stakeholders;
- building the brand values within the company.



The route master provides a visual picture/leader board for the office, showing how projects contribute to the company strategy and vision, prioritising ideas and future projects as well as tracking the projects through to completion via an interactive board on the wall.

ILX Group

ILX Group provides professional business technology-led learning and consulting services. It uses gamification in its services and one particular example is its snakes and ladders game. Designed and built by ILX Groups's own development team, this engaging game brings together learners in a fun way. The game has been designed to be subject independent allowing ILX Group to use it across its entire training portfolio as a revision tool. It comes into its own in the classroom, where learners form teams to play head to head.

This has helped improve the learning engagement of courses; increase the learning experience and provided a deeper understanding into the learning methodologies. The use of animation and audio along with a 'big screen' experience help break the ice and bring learners together to share ideas and broaden their understanding. The feedback from customers has been incredibly positive with comments ranging from "the most innovating learning experience I have ever had" to "I literally cannot wait to tell my work colleagues how much fun gamification is!"

To build on this success, ILX Group is committed to developing further gamification ideas and concepts which will extend the reach to a wider audience and promote the most innovative learning methods on a global basis. ILX Group aims to further capitalise on the real benefits to its customers and work to enhance their practical, applied and fun learning.

SAP AG

Business software maker SAP uses gamification in a large online community of SAP professionals.

When a customer or partner asks a question on the SAP Community Network (SCN), both SAP employees and SAP experts can provide answers and guidance. The member who posted the original question can then reward other members for their answers based on how useful the response was for them. It is also used for blogging and editing wiki-documents such as FAQs, for which members can accrue more points.



These points indicate a member's competence with the technology and these have even taken off outside the SCN as a professional rating, particularly for independent consultants. For some members this has led to more and more interesting projects or jobs.

UK Department for Work and Pensions

The Department for Work and Pensions (DWP) invested just over £100,000 to set up its own gamification system to develop internal innovations. Within the first year of operation a £20m benefit was generated from successful ideas developed through the platform (Cotterill, 2012).

The DWP platform encourages the development of internal innovations through a stock exchange system with a virtual currency. Users propose their ideas on the platform and 'shares' can be bought by fellow employees if they consider the idea to have high potential. The platform encourages the sharing of ideas, and it ensures the quality of content by giving credit to marketable ideas.

Team work is promoted within the platform by using online problem solving between users sharing ideas and solutions to develop the ideas. This creates a sense of community, and drives user engagement.

The DWP believes that this tool has created a significant return on investment within its first year through the implementation of creative ideas, as well as creating a more stimulating environment to work in and facilitating the discovery of previously untapped potential.

The future of gamification

Gamification has been called a buzzword and fad by some of its critics; however elements of gamification have been used for a long time including loyalty schemes and happy hours in bars and restaurants.

Some statistics show that the usage of gamification in an organisation can decrease over time, though this can be due to a number of factors including gamification planning and implementation. If the difficulty or challenge levels do not increase, employees get bored and stop engaging and interacting with the system. Unless organisations analyse the data generated and adapt the system accordingly then it risks failure.



The majority of gamification programmes currently focus on the end goal rather than the journey to reach the end goal. Gamers traditionally find the most rewarding goal is devising the strategy to achieve that goal; stop the opposing team or evade traps, not simply holding the badge/reward. Therefore if gamification is to continue its path from the gaming industry into the modern workplace, careful consideration must be given to finding a way for people to experience some sort of narrative on their way to an end goal.

To ensure gamification is not just a trend, organisations need to ensure they are using well-designed games. Simply introducing or adding a game application does not guarantee results (or the right results). To ensure a high level of engagement, as well as the system being fun and relevant, the game design needs to be well researched to ensure it has the right approach to improve virtually any aspect of a business.

According to a 2011 Gartner research report it is estimated that by 2015, more than 50 per cent of organisations in the US, which manage an innovation process, will 'gamify' those processes. The research findings are backed up by companies such as

Cisco, Oracle and SAP, which are all reported to be developing gamification to increase engagement. This commitment from blue chip companies suggests there is much more to learn from early gamification successes and failures, and that thorough investigation of this will reap benefits in the future once the effects are fully understood.

Gamification is an interesting and exciting prospect within project management. One of the main interest points is the understanding, interaction and manipulation of human behaviours within project teams, in order to achieve the project manager's desired outcomes and results. Project managers must carefully consider which behaviours need to be manipulated or changed, why these should change and how the gamification tool can help achieve this. Until the detail has been considered and thought has been given to the impact on, and reaction of, the project team, the implementation of any form of gamification should not proceed as the risk for team destabilisation and unintentional behavioural changes remains a real, and potentially damaging, possibility.

Gamification has the potential to be a useful and valuable tool in project management. Used in the right hands and implemented in the right way, examples in the business world have shown that a 'gamified' team can be a happier, more motivated, engaged and cohesive team.

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Further reading and useful resources

Bunchball www.bunchball.com

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Appendix

Gamification and the *APM Body of Knowledge* sections

Looking at gamification in relation to the *APM Body of Knowledge* (BoK) sections helps to identify how this emerging concept could link in with project management and be applied within a project team. The following table illustrates how gamification can be applied to just some of the aspects of project management and the different ways gamification can be implemented.

APM BoK (6th edn) section How could gamification apply?

Context – governance

1.1.1 Project management	Tasks are defined and allocated and the use of gamification tools allows for planning, scheduling, managing and motivating the project team.
1.1.5 Knowledge management	Sustained growth of knowledge databases such as wikis can be strengthened using gamification platforms.
1.1.6 Life cycle	Tools can be customised for stages of the project life cycle to keep metrics and incentives relevant.
1.1.7 Success factors and maturity	Allows clear goals and success factors to be set and measured up to completion.

Context – setting

1.2.1 Environment

Simulating business environments in a gamified manner can improve the understanding of the environment. This also allows the modelling of potential effects of changes by employees and employers in a safe manner.

People – interpersonal skills

2.1.1 Communication

Clear project objectives and goals given. Project performance information is available for all and instant feedback is available for employees and management.

2.1.2 Conflict management

Assists in reducing conflict through the introduction of clear and concise goals. Rewards are transparent and can visibly be awarded for good performance. These aspects will reduce the occurrence of conflict.

2.1.5 Leadership

Enables project visions and direction to be communicated and helps project team alignment through incentives.

2.1.6 Negotiation

Negotiation skills can be practiced and effective methods rewarded and reinforced.

2.1.7 Teamwork Increases team motivation and encourages competition within the team/with other teams. Working toward clearly defined goals helps to build a cohesive team.

People – professionalism

2.2.1 Communities of practice Communities can be formed utilising the communication tools available within a gamification platform. Effective cooperation, delegation and professional development can occur within these structured environments.

2.2.4 Learning and development Helps individuals to build personal profiles and provides an incentive to fill competency gaps with relevant training.

Delivery – integrative management

3.1.1 Business case Enables creation of business cases collaboratively, encouraging innovation and creativity as well as reducing individual workloads. Can improve stakeholder buy-in due to the considered preparation process.

3.1.3 Information management Provides project teams with instant status updates and gives recognition to top performers. Information is easily accessible.

- 3.1.4 Organisation Team members can increase their profile and display their competence on the project, while being able to demonstrate their responsibility and accountability.

- 3.1.6 Stakeholder management Encourages stakeholder buy-in and interaction with sponsors. Information can be flowed easily to all parties.

Delivery – financial and cost management

- 3.4.1 Budgeting and cost control Assessing current performance versus budget within gamification enables greater understanding of how individual contributions affect project budget levels, potentially enabling improvements in spending behaviour.

- 3.4.2 Funding Enables quicker identification and greater understanding of over or under funding of areas within a project.

Delivery – risk management

- 3.5.2 Risk techniques Differing techniques for risk reduction and mitigation can be compared with ideas for improvement being rewarded.

Delivery – quality management

3.6.1 P3 assurance

Relevant performance statistics can be viewed via the system dashboard, enabling stakeholders to assess current time, costs and scheduling of the project compared to the baseline.

Delivery – resource management

3.7.1 Contract

Through the implementation of a gamified profile, members of an organisation can apply for and be selected for a new role/project based on their badges, points or competencies.

3.7.3 Procurement

Effective procurement can be gamified to encourage employees to undertake established best practice procedures when procuring supplies for a project.

Interfaces

4.2 Health and safety

Incentives can be used to increase the importance of health and safety activities.

4.3 Human resource management

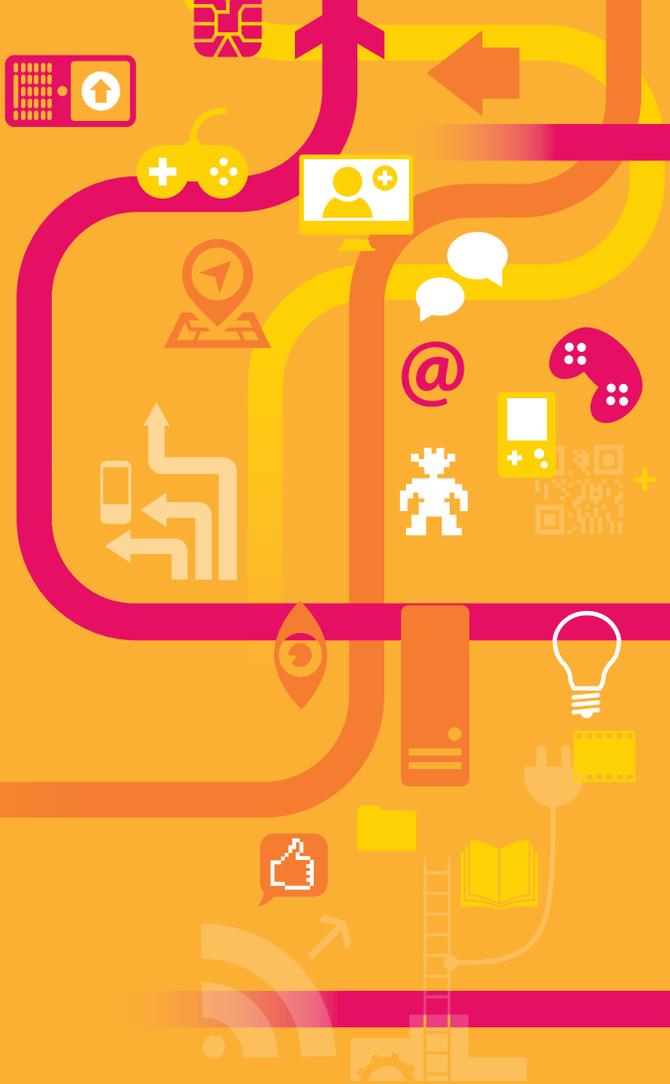
Enables a business to recruit the right people to project teams, helps retain the right people, allows rewards when necessary and helps to develop and train people.

4.5 Security

Information on industry/company mandated security requirements can be disseminated and reinforced through a gamification platform.

4.6 Sustainability

Employee behaviour can be monitored and rewarded using points, badges and recognition. Significant changes in employee behaviour can be instigated.



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