SWE441 Human Elements in Projects and Organizations

Individual Project: Human Factors and Productivity

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# Project Outline

## Luminol Games

* This strategy is created for video game development company, Luminol Games. Luminol Games employs 3000 people and creates video games in a wide array of genres. This includes strategy, action, first person shooter, and RPG games. While Luminol Games utilizes some corporate practices in terms of communication, team interconnectivity, and human resources, there is a large room for improvement with productivity.
  + Luminol Games has 3 offices in the United States, Melbourne, Australia, and London. While the largest office is in the US, the other two are sizeable and provides unique challenges in the way of IT management.
  + The IT team handles all internal hardware management, network management, and ongoing maintenance. Examples of managed hardware would be developer computers, monitors, peripherals, and included security software among other things.
  + On a global scale the team manages a fairly strict firewall and monitoring. Since much of the company’s value is often derived from it’s ability to maintain confidential information, this is particularly important.

# Human Factors and Productivity

## Human Factors

* Human elements in our strategy are unique to Luminol Games. While there is many ‘must-have’s’ out in the wild that exist for management, one that fits the company is very important. Borrowing from TheHumanFactor.biz, we list a couple of important factors for Luminol Games:
  + “**Value propositions.** These explain the value you provide to your organization’s different stakeholder groups, both internal and external. For example, why do customers buy from you? Why do employees come to work for your organization? What kind of return can shareholders expect? How does your community benefit from the work you do?” 1  
    This will allow us to remain aligned, and focused. A concrete ‘why’ helps with ongoing work, especially in longer stretches of work.
  + Similarly, our purpose as a company should be well defined, internally and externally:  
      
    “**Mission.** This defines why you exist as an organization. Specifically, it tells *others* (not just those in the organization) why you exist. Ideally, it describes some noble purpose that is both inspirational and aspirational, so that it instills pride in all those connected with the organization.” 1
  + We will focus on the **importance on our employees**. Our internal “customers” are the reason we strive. This should remind the organization to always strive for empowerment among the working staff.

## Inhibitors

* Some specific inhibitors of this for Luminol Games include:
  + Burnout leading to low morale. The lack of work life balance in video game development culture as a whole is a unique, and particularly toxic issue.
  + Perhaps even more insidious, self-imposed *crunch* or burnout. A similar solution to the above can be applied to similar issues. No work-life balance despite how it is enforced can be an issue.
  + Lack of transparency. The right amount of transparency can be helpful to a group of Employees. Too much of this can also turn into a problem.
  + Lastly, a lack of communicated vision. Similar to transparency as a downfall, and mission as a factor, a solid vision is a must for the development of a video game. Without cultured vision, it is very hard for a team of creative to strive.

# Success Factors in the IT organization

## Success Factor Identification

* + Human elements that can contribute to success vary wildly, and grow exponentially per employee hired.   
      
    Setting out to further identity areas of improvement in Luminol Games, we are leaning on research from INF.UFSC.BR 2 for this portion:
    - Cultural differences: as more working relationships grow, the higher the opportunity two people do not get along. Ignoring how you are hiring, who you are hiring, or when you are hiring can result in a much longer, or costly project.
    - Management strategy: Lapante explains 4 popular management styles, theory X, Y,Z, and W. All varying pretty dramatically. This is summed up by saying, “When it comes to using a management style, some managers are purely one style— whether Theory X, Y, Z, or another. But you can’t use the same technique with everyone—each person has different sources of motivation.” 2
    - Sense of involvement: the feeling that an employee is impactful and helpful within a project is tremendous and can sometimes be more valuable than a monetary compensation. This can be expounded by offering mentorship and new responsibilities

## Success Factor Contribution

* + Paying close attention to ‘culture fit’ or the human nature of the employees you are hiring can help avoid issues with culture differences. Not only will this help eliminate future issues, but can improve productivity.   
      
    The right people working together can prove to greatly increase efficiency. This is summed up in Laplante’s article by saying, “Many management styles exist, and you will sometimes see hybrid approaches. A brief description of some of these styles can help you better understand your style and that of your boss or organization. Understanding these styles can also help you adapt them to different situations and people.” 2  
      
    The improvement to implement here would be to set forth desired principles for hiring teams. This helps filter job applicants to ensure they’re not just technically capable but also a good fit for Luminol Games.
  + The above helps us bridge into understanding management strategy and how it can benefit productivity.   
      
    Aside from choosing the right people to hire, how you manage those employees is equally important. The same staff that is motivated by setting elaborate principles before them will not also be compelled by a completely hands off approach.   
      
    Luminol Games can improve this in **current** employees by taking internal temperature checks on how they best interpret information. Working with managers in the respective portions of the development studio we can identify strengths and weaknesses to shape the current leadership style.
  + Lastly, looking at a sense of involvement we will identify in budget and schedule areas to set forth time for employee improvement. Some foundation concepts include:
    - Self-improvement time for the employee to explore avenues to improve professionally through self-study.
    - Goal setting sessions with direct manager. This should include well-articulated and reasonable goals within employment scope and personal life as well. SMART goals are a great wireframe for this.
    - Shadowing and mentoring opportunities. This provides an easy way to emerge an employee into a great career experience. This should be separate from manager or senior mentoring.

# People, Processes, and Technologies

## Relationships to IT success

**People**:

People are always at the heart of IT project success. Developments and projects begin creative in nature. The project is built, iterated on, and added to base on *human* requirements. Outside of this initial basic need for people in the requirements phase, there are some specific roles that heavily contribute to the ongoing work in an IT project that will be outlined in the examples portion.

**Processes:**

A near contributing factor to people is the processes that they utilize. Processes provide a framework for what may otherwise be an unruly operation. Processes increase productivity, ensure efficiency, and can even improve communication. If a successful project is built on a successful team, a successful team is built on solid processes.

**Technologies:**

Technologies are often our can and cannot, they help us understand the limitations of our project. Technology also helps us enable our work. A good technological environment does not get in the way of the people and processes that are set in place, and a great technological environment helps us do better work and communicate more effectively. Project Management Institute sums this up by saying, “Technology assumes importance in the context of project management due to greater challenges in today’s technology-enabled work environment, where technology tools are routinely used for collaboration, communication, and deployment of project management practices. It is becoming common practice for even co-located project teams to use the electronic medium for the sepurposes.” 4

### People Examples

***Example 1***

Leadership can make or break a project. CTU Online describes a successful leader as, “A good leader demonstrates several important qualities that contribute to the success or failure of an organization. Leaders are involved in organizational change and are integral in impacting organizational behavior. Good leaders also know how to lead people and teams by leading by example and through motivational techniques. In this unit, we will look at the impact leaders have on organizational behavior, leadership impact on groups and teams, motivational efforts.” 3

***Example 2***

Project Development teams contribute to the projects success by developing the software that is eventually delivered to the stakeholders involved in the project. They contribute by writing, testing, and delivering the code.

***Example 3***

Senior software developers contribute to a project by helping with both leading code development as well was facilitating team activities and growth. They are in more of a leadership role typically, and help bridge the gap between vision and execution.

***Example 4***

An example of an executive contributing to the success of a development projects would be facilitating proper funding for the project. Executive A works with budget control in creating business case for the project as a whole. Executive A campaigns with Executive B & C in getting approval for the rest of the board. From here this provides a comfortable starting point for the development team.

***Example 5***

IT teams in combination with a development team can be a crucial combination. An example of this would be an IT team setting up devices and hardware for the entire team **before** beginning development. This could include setting up usernames and proper security protocol for working on external (or unsecure) networks via a VPN.

### Processes Examples

***Example 1***

Utilizing communication as an example, we can start to see how processes allow us to be very specific and precise with how we follow a rule set. CTU Online 3 details the following *dos:*

When communicating in business, the writer should do the following:

* Be truthful and honest.
* Give credit for work that is not the individual's own.
* Be professional in the delivery and presentation of the writing.
* Select the vocabulary carefully and use consistent pronouns.
* Edit the work with scrutiny for any errors.

This is a great example because is showcases what is important about a particular process. The more specific it is the better.

***Example 2***

While the above refers to technical writing, specifically, the nature of the details informs how to create processes. This can be transposed to how to utilize Slack within a team channel:

* Only use @here keyword to ping on highest important areas.
* Utilize do not disturb from 5 PM until start of next day.
* All Slack plugins must be approved by system admin.

***Example 3***

Project management processes will be adhered closely to PMBOK’s body of knowledge. If there is a discrepancy in process refer to the relevant area in PMBOK’s guide at <https://www.pmi.org/pmbok-guide-standards>.

***Example 4***

PPQA or product and process quality assurance ensure that the processes we utilize are of relevance and quality expected to execute a successful development. This is described by Wibas for the CMMI guide as, “The Process and Product Quality Assurance process area supports the delivery of high-quality products by providing project staff and managers at all levels with appropriate visibility into, and feedback on, processes and associated work products throughout the life of the project.” 5

This may be used to vet new incoming processes both in planning stage and during development.

***Example 5***

For code pushes to production, an example of a process that would help filter and assure quality would be a second check before approval.

All branches being pushed to production for code must be verified with two other members of the development team before continuing.

### Technologies Examples

*“Technology’s role in project performance depends on how technology systems are designed in organizations.” 4*

***Example 1***

MacBooks are granted to the entire team from the internal IT team. The specifications for these computers were heavily considered well before development. They include 16GB of RAM for rendering and plenty of processing speed. Along with this are sets of two displays per engineer, per desk.

***Example 2***

Project management software is setup for the senior developers and executive stakeholders. Basecamp is utilized heavily during the planning stages and also utilized to keep track of progress. Surface level or ‘general’ PM tools have found to be less than satisfactory, this is contrasted, however, by PMI’s findings with more complex tools, “The shift to sophisticated PM tools, driven by factors such as project complexities and diverse cultures requiring new management skills, is having a profound impact on project leadership” 4

***Example 3***

To help conduct communication across the development team as well as the development team to the rest of the company and stakeholders, Slack is installed on provided MacBooks. This allows for the creation of channels and private messages between members of the instance ([www.slack.com](http://www.slack.com)).

Administrative restrictions are put in place for this Slack instance and consideration for archiving and paid instances of this Slack account will be decided early on in development but not up front.

***Example 4***

An array of peripherals will be available to developers that require them. These include:

* Wireless keyboard
* Wireless mouse
* Full sized keyboard with number pad
* Display stands
* Third (optional) display

***Example 5***

For agile ticketing we will be utilizing Jira ([www.atlassian.com/Jira](http://www.atlassian.com/Jira)) to keep track of our current working tickets, a backlog of tickets, and to collect any changes that occur during the development process. This is utilized exclusively within the development teams and not at the executive level. Licenses provided to this will be limited.

Jira will also allow our development team to better collaborate on potential hurdles that may arise.

# IT Project Stakeholders

## Stakeholder Identification, Roles, and Responsibilities

Internal and external stakeholders will identify Luminol Games stakeholders. Within these categorizations, the stakeholders will be listed in order of importance in terms of communication. For our identification and documentation we will be utilizing the PMBOK guide processes for project stakeholders. 6

We’ll be utilizing the following steps as our process in identifying stakeholders and the corresponding challenges:

1. Identify and document a list of all project stakeholders

2. Validate the Stakeholder Register (list)

3. Create a high-level approach for communicating with all stakeholders

4. Define your responsibilities as project manager, and those of other stakeholders 6

### Internal Stakeholders

* + Game Director (Project Manager)
    - The game director manages the vision and direct work for projects.
    - Typically the role reporting potential issues and changes, but should be the first to be reported to in any other scenario.
    - Directly handles steering change with development.
    - Daily job / career is directly tied to the success of the project.
  + Luminol Games Senior Development Team
    - The project development team will exist as several different sub sets. The heads of the sub teams, senior developers, will be next in line of communication. The game director typically handles this.
    - Daily job / career is directly tied to the success of the project.
  + Luminol Games C Level Staff (Executive)
    - This may include CEO, CFO, CTO, and other board members for Luminol Games. This **does not** include C level staff for the publisher company.
    - Communication to C level staff may be tempered depending on urgency and will be decided by the game director.
    - Stake is defined by the success of the project, but not solely dependent.

### External Stakeholders

* + Investment Group
    - The related investors will be communicated to at the same rate Luminol Games C Level Staff will receive.
    - Investors hold a financial stake in the success of Luminol Games as a whole and the success of the current projects.
  + Publisher
    - The publisher will be informed of any financial, scope or scheduling changes.
    - The publisher holds stake in the well being of all current and future projects’ success.
    - A publisher can be a part of a Luminol Games project in lieu of an investment group / investor.
    - A publisher’s reputation is closely tied to the ability of Luminol Games’ ability to produce quality work in a timely manner.

## Stakeholder Communication

|  |  |  |  |
| --- | --- | --- | --- |
| **Stakeholders** | **Communication Type** | **Primary Manager** | **Communication Frequency** |
| Game Director | Meetings: In person or WebEx  Senior heads include major milestone accomplishments, scope changes, open conversation and questioning about ongoing work. | Senior Developers | Monthly |
| Senior Developers | Meetings: In person or WebEx | Game Director | Weekly |
| Executive Staff | Meetings in office with major milestones, scope adjustments, and potential issues. | Game Director Reporting | Monthly |
| Investors | Written letter with major milestones and scope adjustments. | Game Director | Ad Hoc or Minimum Quarterly |
| Publisher | Meetings: In Person or WebEx  Conversation around progress, potential issues arising, and unforeseen financial constraints. | Executive Staff | Monthly |

# Behavioral Layers

|  |  |  |
| --- | --- | --- |
| **Behavioral Layer** | **Description** | **Examples** |
| **Individual** | The individual layer refers to processes, methodology, and focuses that refer to a specific individual. By focusing on an individual within a project, you’re able to have a quality development cycle. Project development **starts** with the individual and builds out. | Examples Include:   * Career Fulfillment * Benefits, fair pay, clear expectations. * Role Definition |
| **Team** | A team layer refers to a project team as a whole. For Luminol Games this will be the project team as it relates to the current game development cycle. This changes. Team makeup, culture fit, communication, and hierarchy are only some of the largest elements of a team. | Examples Include:   * Team Makeup * Hierarchy * Major Stakeholders * Communication Standards |
| **Project** | The project layer will refer to any project level requirements, nuance, or process within the current video game development life cycle. | Examples Include:   * Stakeholder Dependency * Project Scope * Project Timeline * Project Milestones |
| **Organizational** | * Luminol Games will utilize a *functional* organizational structure. This is defined as: “These firms are organized into functional divisions based on primary functions such as engineering, human resources, finance, IT, planning and policy. Each different functional division operates independently and isolated groups of workers in a division report to a functional manager. The functional manager generally both allocates and monitors the work and carries out tasks such as performance evaluation and setting payment levels. In this model project managers have very limited authority. Functional organizations are set up for ongoing operations rather than projects and so this organizational structure is often found in firms whose primary purpose is to produce standardized goods and services.” 7 | Examples Include:   * Board Member Makeup * C Level Staff Involvement * Company sub section |
| **Business** | The business layer of Luminol Games refers to the organization as a whole and how it functions. This can include financial aspects, operational aspects, and external relationships. | Examples Include:   * Vendor Relationships * Changing Customer Needs * Financial Agreements * Company policy, values, or processes |

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