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My essay will describe what project managers do on an operational basis day to day, how they ensure ethical norms as well as safety regulations are adhered to

Ethical Challenges of Project Managers

How do Project Managers provide leadership in manufacturing and construction companies?

Project managers are business professionals who provide managerial leadership at the forefront of projects of manufacturing businesses. Their responsibility lays in utilizing their understanding of the manufacturing industry in which they are employed, comprehending the challenges of individual projects and controlling all aspects of the projects from beginning to the end. According to the Project Management Institute website "project management is the application of knowledge, skills and techniques to execute projects effectively and efficiently. It is a strategic competency for organizations, enabling them to tie project results to business goals — and thus, better compete in their markets." (Project Management Institute Inc., 2013) As such, project managers utilize a combination of business and engineering education, understanding of construction manufacturing operations at the ground level, and passion for a dynamic and ever evolving field, to bring together the various pieces of the puzzle which exist within projects they manage.

A project manager is like the orchestra conductor; without the conductor the various musicians on different instruments can indeed play music individually, but it is the conductor's visionary leadership which turns them into a collective group with a common masterpiece. In much the same way, project managers in construction and manufacturing firms orchestrate the various aspects of a project to work together in cohesion to deliver the results which are demanded by customers. The scope of their role is comprised of mediating, coordinating, organizing, and providing leadership while ensuring that ethical norms of their particular industry are adhered to. The responsibility they bear is thus of crucial importance to the success of the organization where they work, and it is essential that the role of their leadership is clearly defined and understood, in order to ensure that continuous progress and increased efficiency of the projects they lead is ensured. It is essential to define what project management and indeed projects themselves are in order to better understand the challenge of leadership which project managers are tasked with.

According to the "Handbook of Project Management" by Colin Dobie, project management is defined as the "management of a series of interrelated activities with defined start and end dates, designed to achieve a common and agreed objective." (Dobie, 2007, p. 9) Projects differ from operations in the fact that unlike the latter, which are based upon repetitive processes which yield predictable outcomes, projects carry within them an inherent measure of risk. This reality is brought about by the fact that projects are essentially comprised of actions and processes in which something new is being created out of an abstract vision, with the goal of satisfying a particular need of a client. As such, each project is unique and furthermore subject to changes which occur in real time, with unpredictable changes and problems that may arise. Bearing this in mind, the project manager must be adaptable, flexible, and resourceful, often making decisions on the go, requiring strong communication skills, charismatic leadership, and a

personal understanding of the standard of ethics required of the project management role which forms the foundation of conduct for the professional.

According to Dobie, the four basic functions of management are planning, organizing, directing, and controlling. In order for a project manager's planning to be effective in a manufacturing and construction business environment, it must operate on the basis of decisive decision-making which is done after taking all factors into consideration and choosing the most appropriate course of action within a given time constraint. This in turn leads the project manager to organize the actions to be taken with care and diligence prior to their actual execution, as mistakes can often turn costly and result in more work to be required down the road. After planning and organizing are taken care of, the project manager must engage in the most visible aspect of the role, which is that of directing. A project manager is essentially a coordinator who manages the actions of various independent variables which depend upon each other for the entire project to take shape and form. Clear dictation of what the vision is, as well as how that vision is to be implemented, is crucial. In order for the project manager to successfully lead the project, as well as manage the human, material, and financial variables, strong and effective communication skills are essential. Furthermore, the project manager must oversee the work done and keep the project under firm control without exhibiting tyrannical tendencies. This requires the project manager to have a charismatic approach that is not confrontational, while at the same time commanding respect and authority. Essentially, the project manager assumes the role of the absentee landlord who nevertheless has eyes on all aspects of the project, ensuring that schedules are adhered to and spending is done according to the budget in place, which requires an understanding of how finance and accounting relate to construction and manufacturing operations.

Project managers who possess the full scope of knowledge and experience of the four functions mentioned are not readily found in contemporary construction and manufacturing industry in Canada. This situation is brought about by the fact that the project management role requires a large body of knowledge and experience of disparate areas which rarely have anything in common in other roles. To further illustrate, a project manager must be able to envision how the product is made, what materials are used, and in which order, while at the same time understanding how architectural, mechanical, and electrical drawings provide the framework as well as a legal pretext for the manufacture. The role is further complicated by the fact that clear understanding of how to generate accurate work orders, invoices, purchase orders, and L.E.M. sheets, as well as calculate costs and work together with the accounts payable department to ensure that subcontractors and vendors are paid on time for procurement of materials and services, while subsequently orchestrating the accounts receivable department to ensure that the company is paid for delivering the product and service, as well as any back charges.

An example of the challenge of uniting this broad scope of knowledge in such a position is demonstrated by the two person project management team of Allen McMillan and Vedran Eminovic, who are presently employed Williams Scotsman of Canada Inc in Edmonton. The company is the world's leading manufacturer of modular office and workforce buildings, with the Edmonton branch that McMillan and Eminovic are at being the largest in North America. The senior management of Williams Scotsman at the Edmonton branch found it difficult to find a single project manager who understood both the ground work labour aspect of

modular building construction while at the same time possessing the financial and accounting expertise and knowledge required, as well as administrative skills. The branch manager and the operational field manager thus decided to divide the role of the project manager between McMillan and Eminovic. McMillan's five years of experience in field operations management in the home building industry ensured that his knowledge was profound in how construction crews operate, what the safety requirements are for work conducted in manufacturing plants and sites, and what well-built modular buildings consist of. In stark contrast, Eminovic's expertise lays in financial management, accounting controls, and administrative prowess, which is based in his previous experience as an accountant as well as a business degree in accounting from MacEwan University. Thus, McMillan assumed the role of field project manager who constantly conducts site inspections and supervision, while Eminovic's role is that of an office project coordinator, where he organizes his time drafting documents, providing accounting controls, analyzing financial expenditures and revenues, and communicating a great deal with customers, vendors, and subcontractors, all within the scope of individual projects. A great deal of communication occurs between McMillan and Eminovic, with the two project managers constantly relaying information to each other on each of the projects. The information coming from the former relates more to the work being performed at the sites and manufacturing plans, while the information communicated by the latter deals with the administrative aspects of the job. The necessary knowledge and experience brought forth by the two disparate project managers is fused into one effective two-person team which oversees a great deal of constantly dynamic project factors at various stages of development.

When a new project is initiated, the project manager in charge begins by reviewing all aspects of the project to obtain full understanding of what is being done and what is expected, prior to commencing with initial contact with the customer as well as delegation of duties to engineers, constructions crews, and manufacturing teams. Upon gaining a clear understanding of what is required by the project, the project manager will schedule a kick-off meeting. According to "Project Management Communications", the purpose of the project kick-off meeting tool is "to formalize the start of the project and to initiate the project activities. The project kick-off meeting tool engages the project team members and enables them to become a cohesive team." (Dow & Taylor, 2008, p. 80) After the project kick-off meeting formalizes the roles of the various parties involved in the project, the project coordinator begins by drafting a letter of award to the manufacturing team, in which the team is legally afforded the responsibility to commence manufacturing of the product. The letter must contain price estimates which had previously been determined in mediation between the company's sales team and manufacturer. As part of the award package, the detailed specifications as well as rough architectural drawings of what is to be built are provided within a scope of work document; in it the various specifications are elaborated upon in detail which is highly specific in nature. Upon receiving confirmation from the manufacturing supervisors that the award has been received and preliminary work has commenced, the project manager contacts the engineering team and requests official architectural, mechanical, and electrical drawings. The Williams Scotsman branch in Edmonton manufactures mobile modular buildings in accordance with the Alberta Part 10 code, which outlines the safety requirements for modular buildings which are to be used in Alberta. There are aspects of modular building manufacturing that do not require the official engineered stamped drawings, such as floor construction, so the manufacturing crew can begin work prior to actually receiving the drawings. The project manager is thus tasked with the fine

art of balancing time constraints and keeping the engineering team's progress on the drawings in check, due to the fact that their potential failure in delivering the drawings in time will mean that the manufacturing plant will actually be forced to stop with their work, thereby causing delays in production. This example illustrates the extent to which the project manager must assume the role of puzzle-maker, who must juggle various bottlenecks in differing teams; these bottlenecks can cause complete breakdown in time-effective delivery of the product and result in reduced customer satisfaction, thereby impacting future revenue and business stability. The project manager must thus remain in a state of constant presence of an alert overseer, as a guiding hand that skillfully balances the art of being firm yet benign with subordinates, while at the same time remaining in a place of respected authority with the highest levels of adherence to ethical standards. Ethical standards are adhered to by the project manager resisting the temptation of allowing the manufacturing crew to commence work on the part of the modular building project that by law requires official engineered drawings to be conducted, without those drawings being actually present. Although the manufacturing crew would theoretically be highly competent, due to previous experience, to build the entire building or indeed series of buildings without the official architectural, mechanical, and electrical engineered drawings, adherence to ethical standards of safety and accountability to customers, the public, and the project management profession stipulates that this practice will not be undertaken at the risk of being late with a project. Should the project be late as a result of this, the project manager will need to willingly assume the weight of the blame and discontent of the customer.

This in turns leads to the question of the importance of the guidance offered by stakeholder voices during the duration of the manufacturing operations of their product. "When these voices are heard…they bring attention to new perspectives and creative conflicts, forcing new thinking that leads to new solutions (i.e. best-of-breed solutions)." (Vallabhaneni & Association of Professionals in Business, 2008, p. 148) The article "Corporate Management, Governance, and Ethics Best Practices" states that these voices are that of the customers, process, quality, standards, partners, regulators, and competitors. An effective project manager must balance these voices while leading the project. The customer is the reason why the project exists in the first place; therefore, complete honesty is required while dealing with the customer, which ensures that this will at times mean delivering unpleasant albeit true updates on the progress of the project. Process, quality, and standards are inherently linked to each other. Adherence to the laws and norms of modular building construction in Alberta, particularly that of the Part 10 code ensures ethical compliance to public safety standards for future occupants of the modular buildings. Correspondingly, this ensures that quality of the modular building product will remain high and that the process will not be hindered with delays, which are caused by lack of adherence to ethical norms and good business practices. The project manager ensures that these ethical foundations are adhered to, constantly inspecting the quality of the work being performed as well as how the standards are being followed, and whether the process is progressing according to predetermined schedule and outlined scope. In the modular building construction industry in Alberta, the partners are the subcontracted firms which the modular building provider employs to perform specific actions, such as engineering firms, manufacturing plants, installation crews, and trucking companies which transport the finished buildings. Due to the fact that the Albertan industry in modular building construction relies heavily upon subcontractor partners as experienced by the project managers at Williams Scotsman, the bottleneck in production often arises at this very segment. Engineering firms may be tardy in

their submission of the official engineered architectural, mechanical, and electrical drawings. Manufacturing plants may experience shortage in crew and inventory, causing production delays. Trucking and installation crews, who ensure that the modular buildings are both properly transported and installed by being set on blocking or skidded foundations, as well as hooked up to gas, water, and electrical lines at the sites of the buildings, may lose time due to unforeseen circumstances such as weather, which will result in the onset of delays of completion of the other projects that project manager is overseeing. Such are the challenges facing the project managers in the Albertan modular building construction industry. The pressure to deliver timely and efficient results is great, and this must be done while at the same time resisting the temptation to give incentive to shortcuts, such as proceeding with manufacturing without official engineered drawings, or by having trucking and installation crews rushing to deliver and install, which can lead to reduction in safety standards, as well as faulty product delivery. Therefore, the project manager must remain in control of the project, skilfully balancing the challenges of deadlines, quality control, accuracy, and ethical responsibility to the public, the customers, and the professional standards of the project management profession, as outlined by the Project Management Institute.

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