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Introduction

Early in my career, I worked for a large humanitarian. Organization in Mozambique, Africa. I had no experience in humanitarian work and very little in leading projects but that changed in a hurry. Literally overnight I was responsible for projects that included water sanitation, building roads and bridges, cashew reforestation, intercropping and farming methods, healthcare, food security, rehabilitating a hospital, etc.

It was my first experience working for an organization that focused primarily on projects but certainly not my last. Little did I know that those project skills would later be a transferrable skill I would use in every job and career I have had since. It would have been helpful back then to have a book like this that gives an overview of what project management is all about with tips and tools useful for avoiding mistakes similar to ones that I made early on with managing projects.

Project Management has become a sought after skill that is in high demand in Business, Government, Non-Profit Organizations, Education, Healthcare, Engineering and Computer Science, Faith Based Churches and Organizations, just to name a few.

If you google the job board, Indeed.com, and type in Project Management you will see over 500,000-project management positions available and that is just from one job board. Include all job boards and my guess it will be in the millions. Being

in the recruitment business for almost 10 years now, I have steadily seen the demand grow for project management experience or certification as a requirement for management positions in all fields of business, healthcare, government, education, etc.

Why has project management grown to be one of the most sought after skills in leadership and management positions today? The rapid change in all organizational environments has moved at such a fast pace that in order to survive our dynamic work environments we need to be able to change at a moments notice. Although you may be at the top today, it doesn't mean you won't be at the bottom tomorrow. Without the continuous improvements and innovations that projects infuse into businesses and organizations, those that haven't adopted a project oriented work environment are simply going to be at a disadvantage to those that have embraced this new reality.

According to Google, a project is defined as an individual or collaborative enterprise that is carefully planned and designed to achieve a particular aim. When an organization has multiple things they need to accomplish that year to keep up to speed with the changing times they usually accomplish those goals by breaking them down into separate projects with various teams or groups working on multiple initiatives. Gone are the days when senior management solved all problems and implemented all initiatives. Today's workforce is a more collaborative environment that increasingly depends on the skills of everyone in the organization working together.

Without a project manager to manager those projects and initiatives can quickly turn into chaos. Businesses and organizations understand this and are continually looking for project management skills and experience in their employees and also in new hires. Schools and Universities are also seeing this fast growing trend and are offering certificates, bachelors, and master degree programs in project management. The last chapter in this book shows a list of universities and organizations that offer this education and certification.

Purpose and scope of this book

I have over a dozen project management books in my office and they are all great resources. However, most of them focus on one aspect of project management and then dive right in to the technical and/or procedural aspects of project management. Don't get me wrong, these are very important, but in my experience understanding human abilities, motivations, and relationships are at the heart of successful project management and therefore should be discussed in detail also.

One section of this book discusses organizational behavior and motivation and another section discusses leading individuals and groups. Without human capital working together in harmony with a common vision, the project will struggle just to get started. Proper planning and having all the tools necessary to implement a successful project is the first step but without people and groups working together, the project will not be successful.

In the past 20 years I have had careers in government, business, humanitarian work, and health care. I am currently a professor of business at Walla Walla University and in the past three years I have completed over 20 real world projects with my students. Major real world projects are part of my curriculum and are often times worth over 50% of the final grade. Because of this my

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students have extensive project experience, understanding not only how to work on projects but what is involved with managing them as well. In fact much of the consulting work my students have done through projects are worth tens of thousands in consulting fees. Businesses and non-profit organizations in the area are seeking us out to consult with them on their upcoming projects.

I teach a project management class and this year the students have chosen a very interesting project. Based on their project management experience, knowledge, and research they decided to write this book you are reading now. Many in this class have completed multiple real world consulting projects and will be getting their project management certificates after this final project.

I have worked on dozens of projects throughout my career with both successes and failures but the teamwork and quality of projects my students have done have been phenomenal. Many of the projects I have worked on in industry were very successful but lacked a vital element – teamwork. My students excel at this. I believe a large part of this is due to the millennial generation and their ability to work well together showing superior teamwork skills, sharing information and power, and not letting independence and selfishness get in the way. I have learned a great deal from working with my students and believe you will too after reading this book.

Learning Project Management by Doing

In my 20's I was working for the State of Washington when a job offer was presented to me to be Finance Director of a Humanitarian Organization in Mozambique, Africa. Because of my love for that type of work I accepted in

a heartbeat. Shortly after arriving the Country Director left and I was interim Country Director until the new director came nine months later. Managing over 500 people and multiple projects was certainly a challenge but I had a great team of people to work with and that made all the difference.

As I mentioned previously we had projects that included water sanitation, building roads and bridges, cashew reforestation, intercropping and farming methods, healthcare, food security, rehabilitating hospitals and clinics, etc. However, when I first started we had one grant from USAID (United States Agency for International Development); a branch of the State Department. We only had one major project at the time, but there were multiple small projects that supported it as well.

Before the civil war Mozambique was one of the largest exporters of cashew nuts but during the long, bloody civil war all the trees were cut down and used for firewood. After the war ended, our five-year project with the US Government was to rehabilitate that cash crop. Our agricultural engineer from the Czech Republic came up with a plan to bring back the cash crop in a short period of time. The average cashew sapling in Mozambique took seven years before it could produce fruit and was not resistant to disease so he grafted the Mozambican cashew tree with a disease resistant dwarf variety from Brazil that produced fruit after 3 years. The result was a full sized, disease resistant tree that produced fruit after 3 years. USAID was very impressed and decided to fund us for 5 years. We had dozens of nurseries spread throughout Mozambique and the project grew quite large.

In the middle of this multi-million dollar project the monitoring and evaluation specialist who kept track of our projects out in the bush came to me just days after the country director left. She took the initiative to research different grants available and asked me if we could work on a separate project putting together grants proposals. I told her to show me what she had put together and we would bring it to the group which consisted of the project director, monitoring and evaluation specialist, agricultural engineer, road and bridge construction engineer, chief accountant, logistics and support, and finance director/interim country director that was myself.

The deadline for almost all of the grants we were applying for fell within the next two months, and each grant had a different format for submittal. Some were complicated and required hundreds of pages of financial budgeting, project scope requirements, feasibility studies, environmental impact studies, etc. Each of us were already putting in 72 hour weeks with our existing projects but we all decided we wanted to apply for these different grants and worked together to make it happen.

We applied for 5 different grants and once we put them together the monitoring and evaluations specialist sent them off. We were hoping that we would hear back from at least one donor. What we didn't realize was that we could not just submit them ourselves. In fact, we were quite naïve about the whole application process, and it became evident quite soon that we had opened up a hornet's nest of a situation. We had no idea that we were supposed to go through our affiliated offices in the same country where we requested funds. Thus, when our affiliated offices were contacted by their governments about the submitted proposal, they were embarrassed they did not know

anything about it. You can imagine the earful I got once our affiliated offices found out it was a group of young people in Mozambique thinking they could just simply apply for a grant and get some money. They rebuked us sharply.

Still, that didn't stop us, and literally overnight we went from peacefully waiting to hear something, to people, organizations, and governments wanting to come visit and see our existing projects and proposed project sites. The European Union already had an office in Mozambique, so they wanted to meet with us immediately. Germany, Denmark, Switzerland, Australia, and even the Mozambican Government were sending people out also. We had to make numerous revisions, continuously adjusting our budgets, and providing accommodation for all of the new guests who would soon arrive. The process was tremendously exciting but also nerve-racking.

Maybe forty different people were involved in this process of getting grant approval, and each person wanted something different, and often what they wanted conflicted with other requests. The next few months we all didn't sleep very much but we bonded as a team, and things were running quite smooth given the circumstances because we all shared the same vision and we knew our individual tasks and what needed to get done.

One morning the monitoring and evaluation specialist came bursting into my office yelling, "Steve, the grant we applied for from Australia was approved, and get this, it is the largest grant ever given in the history of the Australian government!"

I couldn't believe it. Everyone told us the amount we were asking for was ridiculously high because the total grant available would need to be shared by many, and we were asking for a huge piece of the pie. But in our ignorance we shot for the moon and got it.

The German Government called me shortly after that, informing me that they had approved our grant request for another very large project. The Mozambican government called our agricultural engineer to tell him that they were giving us a large sum of money for another project. And then shortly after Denmark and Switzerland called. When all was said and done, we were awarded each of the government grants we had applied for. I don't think people fully realize how hard these grants are to get, particularly this many at one time. I had never heard of an organization getting five grants in the same country at the same time.

Why were our existing projects so successful in Mozambique and why did we secure every grant we applied for? Was it just luck or did a formula already exist that created an environment for project excellence? I believe we had a winning formula and I believe the formula can be duplicated across all industries.

Winning Formula

The success of any project is going to require different elements that are compatible with the scope and objectives of that project. No two projects are going to be the same and there are multiple industries in our economy that approach things differently. However, there are some common elements for successful project management that are similar across the board, whatever industry you're working in.

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1. Passion

When a team of people share a passion and love for what they do, the potential success rate of a particular project increases substantially. Try and complete a project with limited enthusiasm from your team and you might as well not even start. Therefore, before you even start your project you are going to have to sell your project to those that will be working with you. Many will have to get permission from their superiors before even starting but that is only a small part. You are only as good as the people who work for you or with you and if you do not have a winning team that shares your passion for this project, you will be starting at an extreme disadvantage.

(In order to secure all five of those grants our team had to be in agreement first. We were already working long exhausting hours and the passion and love for what we were doing in Mozambique were the only things that kept us motivated and moving.)

2. Competence

Passion is great but ability is also important. When putting your team together you need to understand their strengths and weaknesses and be able to give them tasks they can excel at. Probably equally if not more important is the competence and ability of the project manager. However, I have seen teams work around an incompetent project manager and still achieve their objectives but that is uncommon. A strong leader with education and/or experience in project management is an incredible asset to the team but equally important are its team

members and their individual abilities. Then comes the challenge of matching their abilities and interests with the various tasks necessary to reach project objectives.

(Although our team was made up of mainly people in their 20's, we all had very different but relevant education and experiences that were needed for this grant proposal project. It was my job as project manager to figure out what each person's strength was and match that up with the requirements necessary to put together a grant that would be accepted. I first asked them what they were good at, what they enjoyed doing, and what part of the project they would like to take responsibility for. Once they took ownership for their part the project really started to come together fast.)

3. Hard Work

Why mention hard work? Doesn't passion and competence equal hard work? Just because you have a passion and the ability to do something, it doesn't mean you feel like putting in the time and energy necessary to complete your tasks especially if you are already working long hours. In my experience hard work comes from two things; a work ethic you were raised with and a work ethic you developed internally. I have met brilliant people with amazing potential who lacked ambition and work ethic. Knowing this ahead of time will help you with selecting your team and knowing how much responsibility to give them.

(Those that choose humanitarian work, particularly in hardship areas, are usually not strangers to hard work nor are they afraid of hard work. We had a team of people in Mozambique that worked extremely hard and put in long, dangerous, and stressful hours to try and make a difference. Having only a couple months to put together 5 proposals and then court all the different government

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agencies, put an extreme amount of extra work and stress on everybody. Once the proposals were accepted then our work increased even more because now we grew 5 times bigger literally overnight. The hard work had only begun and we were ready to accept this challenge. This leads us to our next category.)

4. Courage

Starting a new project with no guarantee the project will be successful takes a lot of courage. If you are the one initiating and/or managing the project, the responsibility of its success or failure is ultimately on you. It takes a lot of courage to initiate the project, get approval from your superiors, put yourself in the hands of your team members that are helping you, and then taking responsibility for its success or failures. When a project is going well you will find your team will love to share in your success but when it fails you typically are alone. It takes courage because a project failure can affect your confidence, credibility, career, status, social standing, etc.

(I once worked for a boss that did not have the courage to initiate any project. They were so afraid of failure that they never stuck their neck out to do anything. However, anybody under them who initiated or completed any successful project were subject to that project being taken away or credit taken by superiors. It takes a special kind of courage coupled with strong character to start and initiate a project when you know that its success may be exploited by those above you)

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5. Faith and Confidence

When you have a lot riding on the success of a project it takes faith and confidence that the project will be successful. This is particularly true if you do not have a lot of experience in working or managing projects, however once you have completed a few successful projects your faith and confidence in yourself increases.

Those that put their faith in a higher power may be encouraged even more by the realization they are not on their own. I pray three times a day asking for guidance and wisdom. I truly believe that because of that prayer I am guided, grounded, and in harmony with whatever work or project I have been tasked with. I do not feel that the weight of that responsibility is 100% on my shoulders.

(When I look back on what our team accomplished in Mozambique, I truly believe a higher power was leading and guiding us. Of course we had to be willing participants but the order in which everything fell together was not the result of our great planning in my opinion. For those that do not believe in a higher power then luck might be another possible explanation.)

6. Teamwork

Some teams just naturally fit together and others do not. Part of that has to do with personality and temperament. Chapter? explains in more detail the four temperaments; Sanguine, Choleric, Phlegmatic, and Melancholy. A healthy mix of these temperaments makes for a winning team. If your team is dominated by any one temperament, efficiency and teamwork may start to break down.

(Our project director in Africa was a hard driving Choleric that got things done. The Monitoring and Evaluation specialist, a Sanguine, formed strong relationships with the government, community, and stakeholders with her positive and energetic personality. Our Agricultural Engineer and Road Engineer both had Phlegmatic personalities that helped keep the peace when situations became stressful or argumentative which was often. Our Accountants and Directors had Melancholy temperaments that kept our projects and proposals realistic and on task. Without this mix of temperaments our projects would never have been as successful as they were)

7. Patience and Flexibility

As I mentioned earlier, the millennial generation appears to be more flexible and patient with one another than in comparison with previous generations. However, if your team is made up of mainly Choleric personalities, this could be challenging because patience and flexibility are not traits that represent this group.

(I believe our team in Mozambique was patient and flexible because of our age and inexperience. We depended on each other a lot more to accomplish our tasks and goals than teams with decades of experience. We encouraged and supported one another partly out of fear but mainly out of respect and the realization that we needed each other. I have seen it also in my classes also when we are working on difficult projects.)

8. Freedom

In my experience this is probably the single most important element necessary for accomplishing extraordinary goals and objectives. Pick the right team of people with the necessary abilities, skills, and personalities and then give them the freedom to do what they do best. Micromanaging a team typically kills creativity and puts handcuffs on your team members true potential for productivity. Not all members want complete freedom but for those that do and are capable, give it to them.

(Without the freedom to apply for these grants on our own, I am convinced there wouldn't have been any new grant proposals submitted or accepted. I sincerely believe that because of our ignorance with the grant writing process, we took the freedom and liberty to apply for them on our own using all of our different strengths and resources to put them together. Freedom was probably the single most important factor in our securing the different grants.)

I invite you to read the rest of this book created by students from many different departments on the Walla Walla University Campus. This project was a collaboration from many different people and I hope you enjoy its content.

Sincerely,

Steven VanOrden

The Project Management Process

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Chapter 1 Initiating

Every project you do whether big or small will have five parts, whether you notice it or not. These are the elements of the Project Management Process and they include initiating, planning, executing, controlling, and closing of the project. You could write a book on each one of these elements but for the sake of brevity here is a brief overview of the initiation process involved in project management.

Initiating

When Maryland State University football team captain Kevin Plank noticed that his compression shorts didn't get wet from sweat during practice, the idea hit him to make shirts with the same material. Unable to get outside support, he invested his whole \$20,000 savings and maxed out several credit cards totaling \$40,000 to develop his moisture-wicking shirts for football

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and other sports. He came up with shirts that he called "Under Armour" that wicked sweat to keep athletes cooler and drier during games and exercise.

His first year, 1996, was rough, as Plank was broke. But just in time, Georgia State bought \$17,000 of Plank's shirts sending his Under Armour Company on a growth spurt that yielded \$100,000 of purchases by the end of 1997. Soon, Plank was selling to entities and retailers across the nation, and it wasn't long until before was diversifying Under Armour's products to provide other top-level athletic wear, including tights, shorts, shoes, and sweatshirts. Under Armour went public and gained \$115,000,000 to spur further development and growth. Looking back at what he and his team have accomplished, Plank says, "All those things, all those impacts, all those impressions of our brand that you see came much farther beyond anything I ever thought could happen" (Fundable.com).

"Mind

mapping is

a very useful

tool"

For Kevin it first started with an idea and in moving forward he needed to initiate a series of projects to get his idea off the ground. He needed to find a design for his shirts, a manufacturer to make them, a place to sell them, and financing to keep cash flow and product moving. For anything we do we have to first initiate a process.

Mind Mapping

As you will read in the section that discusses tools and software, mind mapping is a very useful tool for the initiating stage. The project initiation phase is the most

crucial phase in the project life cycle in which you define your scope. The right brain, known as the creative side of the brain, is where a project will be envisioned

You always start by brainstorming, and mind mapping is a great tool to organize those random thoughts. Mind-mapping involves creating a diagram where you list the big picture ideas of what you want to accomplish and then later categorize the steps you need to take to make those big picture ideas a reality. There are great free online mind-mapping programs available, like https://bubble.us, which you can use to easily organize your mind mapping.

Entrepreneurs love to use their right brains and dream up a million different possibilities, but it has to be rooted in reality because if their idea doesn't accomplish what they hoped then they're going to lose a lot of money. For larger businesses or organizations something more formal is required when someone comes up with a "great idea". They require what is called a definition document. A definition document is used to separate dreamers with their heads stuck in the clouds from those who still have one foot attached to earth.

Definition Document

Many large organizations will require you to produce a project definition document before they approve a project. Even if it's just you and your friend going out on a financial limb with a great idea, it's important you have a clear document that defines your work. Here are some components to consider:

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1. What is the specific purpose or goal?

Precisely as possible, describe the deliverable the project will produce. What will it look like?

2. What and who will benefit?

Show how the project deliverable will benefit the organization and how it will fit within the existing organizational structure. Make it very clear what the benefits will be for the individuals involved.

3. Success Criteria

Write a clear description of the standards that will determine if the project succeeded or failed when the project is over. What are the criteria that must be met?

4. Address objections and give a plan for overcoming risks.

Give evidence that the costs of the project are worth it in view of the benefits. Show that a cost-benefit analysis makes the project worth the risks involved. Give a specific plan that identifies how various risks will be avoided and where not possible to avoid, handled with minimal damage.

5. Project Dependencies

Clearly map out on paper who and what the success of the project depends upon. If this is not addressed, there will be a much higher chance of resource shortages later on as no thought was given to project dependencies.

6. Overall Budget

This is not a detailed item by item budget. Simply find out roughly which funds are available to determine how big the scope of the project can be and what sort of limitations you will have..

Getting input and information

Even though you may think you have come up with a completely unique and novel idea, odds are that someone else has already thought of it Often times someone else has come up with a similar if not the same idea. There's no point in reinventing the wheel and you should do thorough internet research to see if someone else has done something similar. If you find someone has come up with a similar idea, find out as much as possible about their project and incorporate that into your definition document. It's great when you can create your definition document with documented success from someone who has done it before and was successful.

When Walla Walla University initiated a Project Management Certificate program the first thing they did before they began was to see who else had done any sort of similar initiatives. They looked other university's project management certificate guidelines and curriculum and then crafted their own program. By doing secondary research you save yourself a lot of time and effort. Initiating is markedly simpler and easier when you have someone else's successful work to base your own off of.

If you are having a hard time finding any information about your brilliant idea then start bouncing ideas off of friends and coworkers. Show them why

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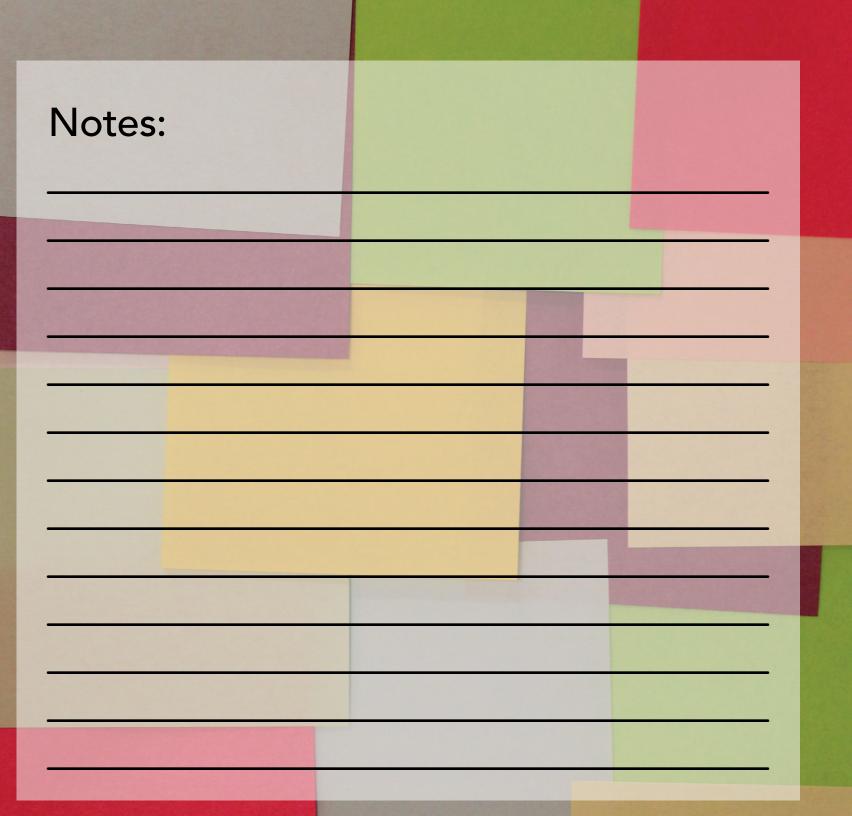
you think it's a good idea. Let them give objections. Start thinking about the feasibility of actually accomplishing the idea. This will all help determine if you should even initiate your project or not. However, be cautious when doing this for two reasons: First, some "bad" ideas where everyone thought they would fail actually became a successful venture, and second, family and friends may not be as truthful with you as they should, prioritizing your feelings above the truth.

The pet rock that sold for \$3.95 in the 70's, or the 200,000 parents that spent \$10 to have a registered letter from the North Pole sent to their kids, or Aquariums without fish. There are always "crazy" ideas that on the surface look ridiculous but then once implemented are wildly successful. It can also go the other way too. Great ideas that look great on the surface but once implemented may actually be failures. Time also determines whether an idea might be silly or not. Today it could be a dud and 20 years from now make millions.

If you are trying to come up with a project that will benefit your organization you may want to sit down and write a page summary of why you think the organization should adopt the project. Stay in the big picture here. How will the organization benefit from the project outputs? What about the risks and how you will deal with them? If you are a solo entrepreneur, then you won't need to show how it will benefit the organization, but you will want to explain benefits to potential investors and briefly talk about why the risks are worth it. Email this brief document to your colleagues and managers. Show them why the project is worth it. Make sure the purpose of the project is clear.

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When you initiate a project that involves others you will need to make sure your communication is clear, and a clever manager will invite input, particularly at the initiation stage. Be sure you let your boss know first so that someone else doesn't steal your idea and submit it first. These sorts of things happen all the time. Communicate to everyone and make sure that they clearly understand what it is you are trying to do.





Chapter 2 Planning

Once you have done your homework and you feel ready to move forward, then you are ready to move on to the planning stage. This part of your project lays the groundwork for the rest of your work, and success or failure can be traced back to this point.

A professor in Walla Walla University's School of Business tells a story about how he witnessed how poor planning can cost people their lives. There were major floods in a third world country that left people stranded in trees, and others clinging to floating debris. The United Nations sent a delegate to this particular country to coordinate the relief effort with the local NGOs, humanitarian organizations, and local Government.

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During the planning stage the UN delegate had no experience in disaster relief and could barely speak the local language. Although everyone spoke English this person was practicing the local language and people could not understand him. He was telling different humanitarian organizations around the table what to do but he had no clue what they specialized in or how they could truly help. He also didn't understand the geography of the area or the town and areas that were affected by the floods. It was truly a planning disaster that could have been solved if someone knowledgeable was put in charge. By the time everyone was finally organized dozens of people perished waiting for aid.

Assemble a planning team

You have heard that two head are better than one. If your project is large enough and you think it will help then by all means assemble a planning team. Some projects are small enough that you can plan them on your own but other projects may require help from a diverse group of coworkers or various experts. If you will have to recruit individuals of varied disciplines in later stages of the project, having a diversified team at the beginning will make the plan more credible later on. However, if you can easily make the plan yourself, then by all means do so. Don't unnecessarily pursue resources that will only complicate things.

Once you have either assembled a planning team or determined that the project is small enough to plan by yourself, review the project initiating document you created so you have the ideas fresh in your mind. If you found it necessary to

have a planning team, meet with them and run through the initiating document with them. Always make sure to take minutes at any meetings including this first one.

Create your plan

Remember we talked about Mind-mapping? Well let's discuss it a little more. Once you have identified the big picture items of what needs to be accomplished, then you can figure out and list the details that help you get there. Go into your left-brain now and organize all of the details into tasks required for accomplishing each goal. Think of everything including details that will be involved in completing your project. What work needs to get done? What resources are required? How long will it take? Who will be involved and how many people are you going to need and for how long? Etc. For each big picture item you created in your mind-map, list all of the details below that.

Gantt Chart and WBS

Once you have done that, then you are ready to drop that information into a Gantt Chart. As explained in our Recommended Tools and Software section in more detail, your Gantt Chart will show you the entire project from beginning to end. Each detailed action item will then be part of the Work-Breakdown Structure



(WBS); a method of organizing tasks into a manageable schedule. The WBS combines several parts which creates a time-line that describes how to move through your project. The example

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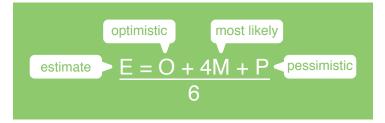
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below shows a simple Gantt Chart that includes a clear WBS and schedule, including a column for resource names, a column for the activity being done, and colored bars to indicate time allotted to each task and key milestones of the project process.

The software tools chapter shows how to use these charts and more options for your specific project's needs. The point is to create a schedule that clearly shows each person's task(s) and the resources and time-line in which they will complete the task(s)

Once you have broken out all the parts into your WBS then you will want to estimate the time and effort required for each task to ensure that each task is doable by one individual. If necessary,

further subdivide the work until it is in small enough chunks that one person could complete a task. The picture to the right shows an excellent time estimating equation for work tasks. For example, Kevin



Plank estimates that the fastest he can get his newest, best Under Armour fabric developed is in 30 days (optimistic). He thinks that it most likely will be developed in 40 days (most likely). But, he realizes that if things went poorly, it might take 60 days (pessimistic). Plug these numbers into the equation. 30 + 4(40) + 60 = 250. Divide: 250/6 = 41 2/3 days. This gives a more accurate estimate of how long work will take. Meanwhile, decide who will do each task and what other resources she/he will be assigned in order to carry out her/his task. If possible, involve the individuals

who will later be doing the work in the estimating here at the start, because this will mean more accurate estimates and more buy-in from them later on.

Plan for change/risks

Besides showing how all the tasks will get done, you will also have to plan for dealing with risks or contingencies. Risks are any consequences or roadblocks that negatively impact project goals or hurt surrounding organizations or people. Examples of risks include sickness of an employee, cost of fuel rising, chainsaw use on the job that leads to injury, or unexpected contention within the project team. Because risks are inevitable, include risk control strategies in the project plan as well. Decide the protocol for dealing with various risks if they happen. Other changes may occur that are not classified as risks, such a sponsor asking for a revision in the building plans of your construction project. Describe in your project plan how these project changes will be dealt with and how you will go about implementing the changes. Once you have identified and planned for risks and changes, you will need to extend the overall time-line to account for these potential risks and changes, or you will need to shorten another task in order to make room for the risks and changes within your time-line. In other words, if you are able to extend the total time constraint for the project, then you can extend the time-line. But, if your completion date is nonnegotiable, you will need to shorten some other task(s) in order to make room for risks and changes within the project time constraints. Make the extensions

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or changes by revising your Gantt chart schedule. How would you like to plan for risks or create a Gantt chart and WBS of this Warsaw Metro project? Whew!!!!

Project Length 44+ years Length 21,7 km 466,00 people per day



Poland Warsaw Metro

Detailed Budget – fat inclusion technique

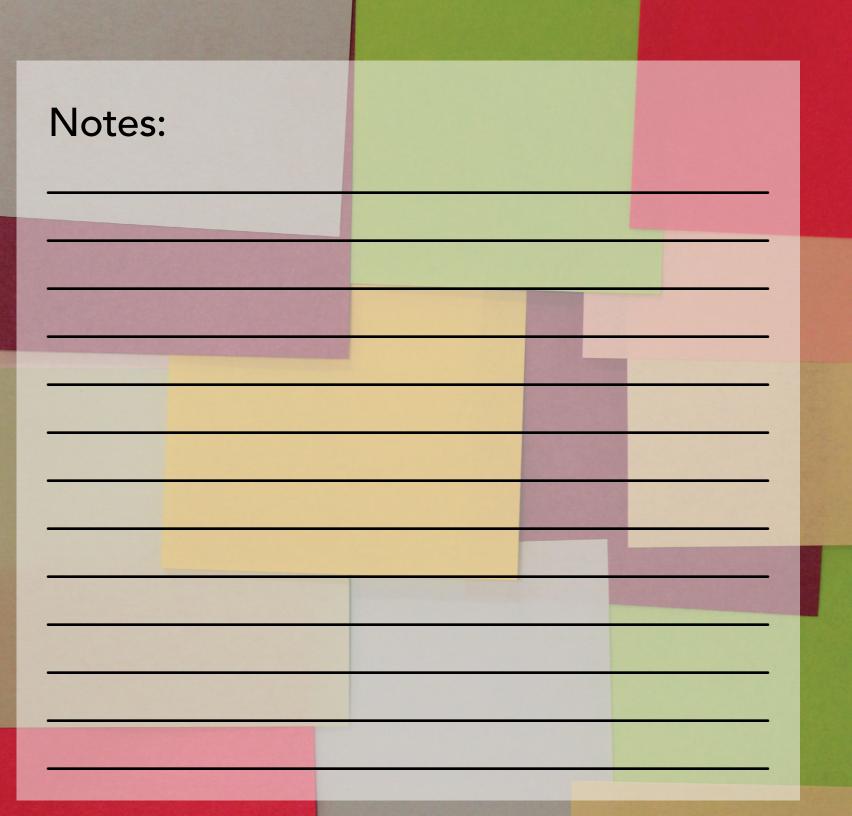
Usually the budget is the last thing people think about when initiating and planning a project but really it should be the first. As you know almost any project you work on there is some degree of resources and money is required to acquire those resources. Some projects cost very little and some billions of dollars. Regardless of the size you will need to first create a ball park figure of what your total costs are going to be. After that you will look at the details of your project, assign a cost to every action item and create a line item budget.

A line item budget is basically a list of each expense that will be incurred in the project such as labor, materials, contingencies, etc. Don't worry too much about format. But do make sure it includes every fathomable expense, right down to even pens and pencils if you will need them. Get your hands on several project budgets from other projects for examples. If necessary, obtain expert counsel

in order to estimate as accurately as possible how much money each task of the schedule will cost. Accurate estimates of how much tasks will cost are not intuitive.

Another common budget challenge arises from missing cost categories. It is extremely important that you list every single expense in the project no matter how large or small. Add some fat into your budget, even after you think you have listed every possible expense. A great rule of thumb is to increase each line item by 10%. Once you have done that then total all line items (with the 10% included) and then add another 10% to that total. Then your budget should be about right.

So you have initiated your project, created your definition document, thoroughly used your mind-mapping tools to create all of your action items, worked out your time-line and WBS, dropped that into your Gantt chart, estimated your total budget, and then celebrated by treating yourself to your favorite desert. Now comes the hard part; executing your plan!





Chapter 3

Executing

Implementing any project plan involves two categories: execution and control. These are essential in order to complete the project, report progress, keep on track, stay within budget and continuously be in control until completion.

Executing

When projects do not succeed it is because the execution process was not completed properly or completed at all. This was the case for a major hospital that was losing money and wanted to expand their facilities and surpass the competition. The hospital hired a consultant who created a plan to help them become a more successful business. Everyone, including administrators, approved the project plan and voted to initiate these projects.

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Unfortunately, nothing happened. The hospital failed to execute their plans. Why did this happen? First of all, there was no project management experience. Second, the administration had no courage and no skills to begin the projects and no people to implement them. Third, they had no budget. Finally, tenured employees resisted the changes and that made it difficult for projects to happen. For these reasons, the project failed and so the hospital was not able to fix the problems. The moral of this true story is that project execution needs a strong hand. The executing phase turns a written plan into reality. We work to construct a plan to meet our needs and put that plan into action. Execution is everything; in this process we realize plans, processes and procedures that are summarized and referenced in the project outline. Without proper execution, there is no project.

The Three Must Haves

Entrepreneurial-Insights.com has a section that gives tips on project execution; one piece of advice that should be kept in mind is entitled "3 Must Haves for Effective Execution."

The first 'must have' is to obtain and utilize the correct team: that a high performing team with the right mix of people working to their strengths is key to project success. The ideal team is made up of members who fit the different roles required in a project. The project leader will need to discover what strengths each member of the group has and use them to optimize the execution process.



The second 'must have' is strong and timely decision making. Project leaders sometimes have to make difficult decisions during delicate stages of the project. They need to stay updated with where the project is and keep the project – and its' team members on track. Some decisions include steering the project in the right direction, and sometimes going as far as shutting the project down if it is becoming a sinkhole. Adil.io has an article: "Ideas Are Worthless, Execution is Everything." People can overvalue ideas and spend too much time focusing on rather than implementing them. When you have an idea, Adil.io states that "you should assume 10 other people have that same idea... What makes the difference is your ability to execute that idea." In order to succeed, we need to take action and quickly be able to respond to unexpected challenges. Ideas and strategies are important, but executing is what counts.

The third 'must have' for project execution is *open and clear communication*. Throughout the project, communication must be present among the team members. This is crucial to making the project succeed. If communication is lost or not there at all, the project can fall apart at any point. Having a reporting system can help keep top management aware of what is going on throughout the project, allowing them to make necessary decisions to successfully complete the project. Some types of communication include – among others – written, verbal, electronic and face-to-face.

Besides good communication, there needs to be a clear idea of what we are doing and why we are doing it; leaders should envision the end result so they can consult and work with the rest of the team. Once everyone understands the project, it will be easier to complete. Take this example: a brick wall. The foreman

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(or project leader) could say, 'we need to build a brick wall.' But that would not be clear orders. Is this wall going to be the front of a house? Is this a retaining wall? How big is the wall going to be? What type of bricks? What size? Color? Having an understanding of what the goal or vision is will create an environment of partnership where each team member is willing to take joint responsibility.

Project teams

Teams are the most important tool needed in making a project a success; they are the ones doing the grunt work. Without a well-structured team, project planning will be disorganized and out of control. Project teams need certain characteristics that will make the project a success.

Important characteristics include commitment and professionalism. Team members need to be committed to their particular job in the organization. If there is no commitment to the project and to the team effort, then there is no reason for them to be a part of the collaboration, and you are probably better off finding a new team. Team members must act professional and take responsibility for which roles they are assigned.

Another characteristic is trust. Each team member must be able to trust one another; this is a characteristic that needs to be approached carefully because it takes a lot of time to gain trust and very little time to lose it. However once trust is established it creates a strong work environment where a team can easily express ideas and work well with each other to create a finished product quickly.

Leaders are also key to creating and maintaining project teams. They are responsible for choosing the right people that can work and plan together. If the hospital had appointed a strong leader, they might have created the start of a good team that would have contributed to the success of the hospital. Every leader must have a strong management style where they can set expectations that are understandable and reasonable to finish in a timely fashion. Leaders must also be there for their team and *let them know*. Team leaders recognize hard work and reward their team accordingly so that they retain motivation to finishing the project in the most expedient manner.

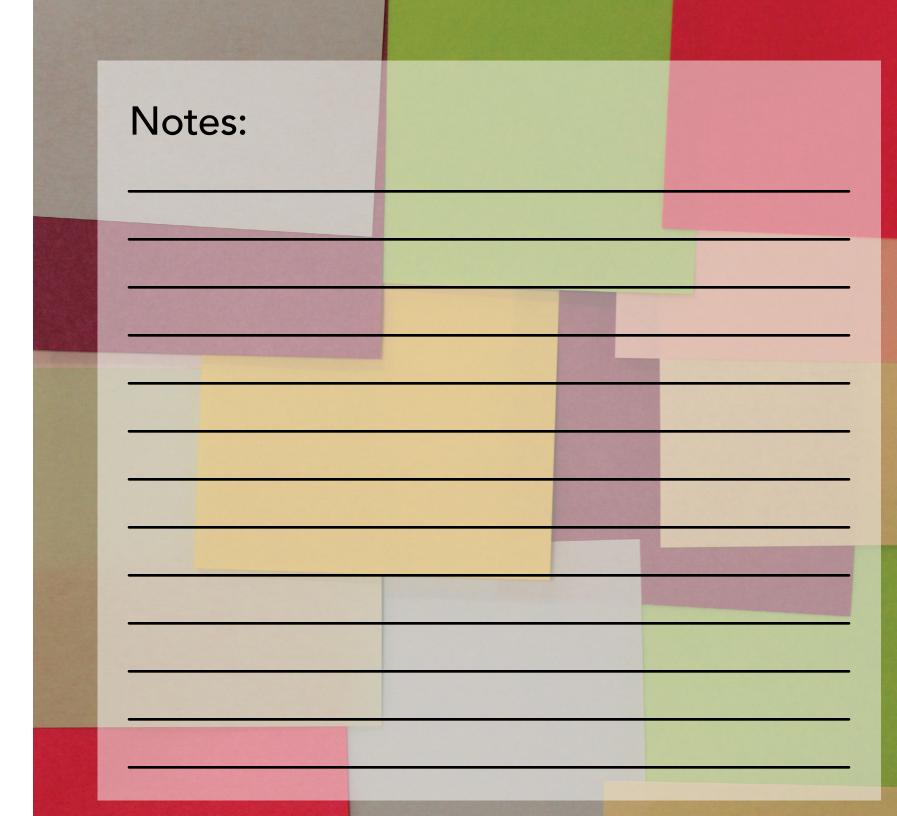
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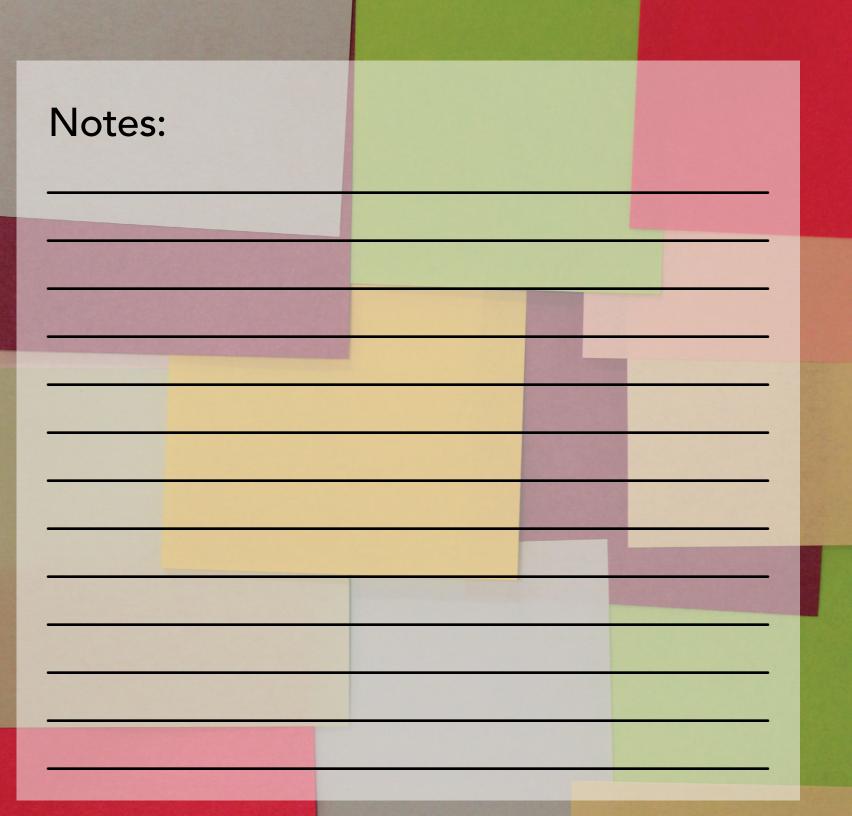
How do we execute?

A successful project execution is seen in the results of the project; being able to fulfill the requirements and at the same time finishing on time and within budget. Smallbusiness.chron.com has a list of steps to successfully execute project requirements:

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- 1. Identify the project milestones.
- 2. Break down those milestones into tasks.
- 3. Purchase the needed equipment and materials.
- 4. Distribute tasks to team members according to each of their areas of expertise and time availability.
- 5. Track each team member's progress and task according to the plan.
- 6. Meet with team members regularly to discuss progress and any challenges.
- 7. Monitor all expenditures to remain within budget.
- 8. Communicate project progress regularly to all of the stakeholders.







Chapter 4

Control

A California organization was about to go out of business; before that happened, they came up with a solid plan to prevent the closure. This plan was successfully executed because they had all the things that the hospital did not: they had a solid team and their organization had a very good project manager; they also had support from employees and other stakeholders; the project execution was great, but the control the team had over the project was even better.

How did the organization keep control of the changes involved in the project's plan? First, the leader managed individuals only when it was necessary to help motivate progress. Second, the manager kept control by implementation of the Hybrid Theory between X and Y. 44 Chapter 4 – Control

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The organization endowed the team with a sense of responsibility over the project being implemented as well as control over certain decisions made. Once the manager established a working schedule, he would not check in as frequently for maintenance after the project was finished. This shows employees that their manager both trusts the work done, yet still takes an interest in the work they do. By being in control the manager was able to keep the project going, maintain project plans and lead the team in successfully completing the project.

Theory X and Theory Y

Team leaders implement strategies to have better control over their teams. Leader's management styles are influenced by their beliefs and assumptions of what motivates their team. This is where Theory X and Theory Y come into play. By recognizing what theory is present in their project, leaders will adapt the way they approach the team and manage them more effectively.

Theory X assumes teams are not responsible enough to progress on their own without a manager supervising. The team is not motivated enough and does not like whatever they are doing. This encourages managers to take an authoritarian role in the project, making sure that things get done. They need to take control and supervise every step of the way so that results are seen, otherwise there will be no desire to work.

Theory Y assumes the opposite of Theory X: it believes that the team is responsible enough to accomplish their assigned tasks. Teams are self-motivated and happy to be working. They take more responsibility and are determined

to accomplish their given goals. Managers do not need to take much control as teams accept responsibilities given and do not need much direction.

When comparing both of these theories, the differences are noticeable and make all the difference in a project. When comparing motivation between the two: Theory X assumes that employees do not like working, try to avoid it, and avoid responsibility. Theory Y assumes that employees are self-motivated, enjoy what they do, and take complete responsibility. Management style is strict on control in Theory X, while in Theory Y control is participative and employees are involved in making decisions.

Theory X management style seems to fit better in larger production operations as well as in unskilled production-line work. Theory Y principles are used by companies that encourage participation from employees, and because of those principles it is encouraged more to implement the theory. Benefits to using Theory Y include a better working environment, and continuous improvement and growth. Even though this theory is recommended, managers need to do what is right for the project and determine what theory is present in their team from what they perceive.

- 1. Be in control
- 2. To make sure you stay on track with any project, you need to have control and monitor it continually. Successful control in a project includes:
- 3. Measuring ongoing activities: the "where are we" question.
- 4. Monitoring project variables such as cost and effort against the project plan and performance baseline: the "where should we be" question.

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5. Identifying actions to correct issues and address risks properly: the "how can we get back on track" question.

PDA

An easy way to remember what project control is, we need to keep PDA in mind. PDA stands for Prevention, Detection, and Action. These three principles are fundamental when looking to be in control of a project. The first principle is Prevention. We need to make sure to prevent variances from occurring by being in control and doing things such as effective planning, communicating with team members, always monitoring risk factors, aggressively resolving problems and clearly delegating work.

The second principle in PDA is Detection. By practicing project control, we can detect early variances. The sooner we are aware of any deviation from the project plan, the sooner we can fix the problem and get back on schedule. For early detection, we need to have tracking systems and work processes in place. Some examples of detection methods to keep in mind are performance reporting and review meetings. This can be reporting back to your team what you have completed so far and going over what is still left to do in weekly meetings.

The third principle is Action. The detection of a variance in our project needs to trigger appropriate and timely responses. Three of the most common action types that are important to keep in mind are corrective actions, change control procedures, and lessons learned. Being able to take

action, change or update our control procedures, and learn from that problem will help us be better prepared for whatever issue we come across.

Management Fundamentals for Project Control

When establishing a project control system, the project manager needs to consider several management fundamentals. One of those fundamentals is focus on what the priorities are. We need to understand what is important to the project: whatever we choose to focus on will become important; realize that there should be an alignment between these two. Another fundamental is scale to project; projects

with low risk or small budgets should not be burdened with a control system that is meant for projects that are larger and mission-critical. A third fundamental is called the "think process." This is when we refrain from spending our time and energy getting basic status information, or feeling like we are not in control of the project. Instead a natural system of control should be established for the project, as well as planning ahead. This should apply to the entire project and also the contribution of each team member.



Powerful Techniques

There are powerful techniques to consider for project control. Small work packages is one; breaking down the work into sections or packages to retain better control and more accurate estimates. That way it will be easier to detect a task that could be delayed and take quick action to resolve it.

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Refer to the chapter on Software Tools, on the section that mentions mind-mapping. Mind mapping can be a powerful technique when first starting out a project because it helps get ideas out there. This and other software tools in the chapter are helpful in putting together projects, making sure that you start them off the right way.

Two other techniques are milestones and checkpoints. They are points where everyone can do the following: stop, report progress, review key issues, confirm everyone is still on board, and verify that the project still proceeds with its mission in the time frame provided. These points can also allow sponsors and senior management to evaluate their investments along the way, as well as redirect valuable resources to a more promising project when necessary.

Performance Reporting

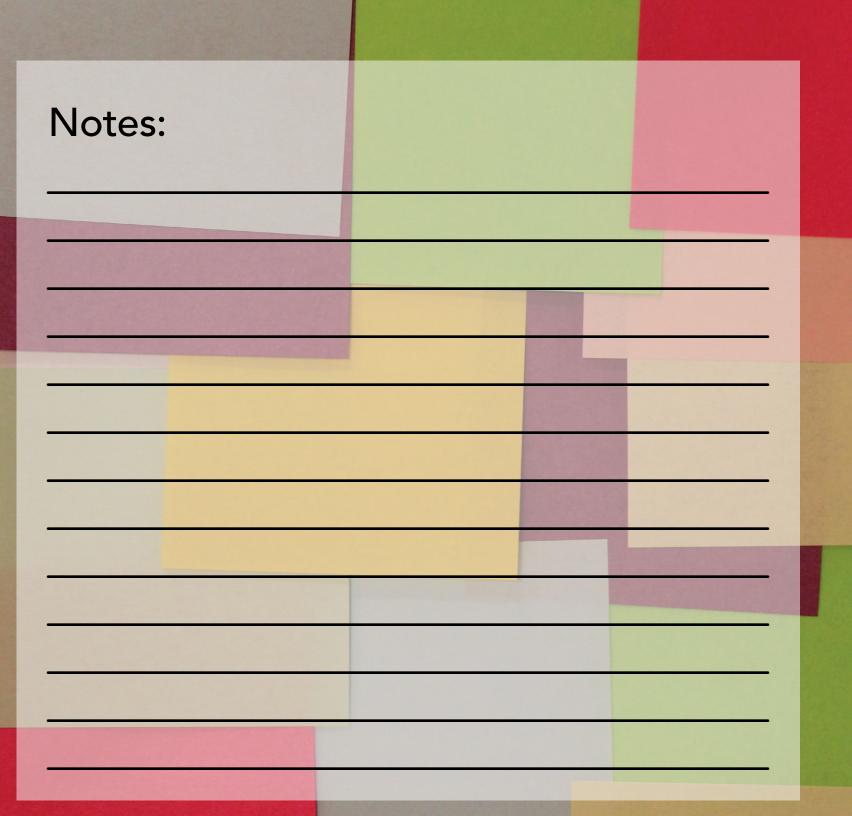
One of the components of project control involves performance reporting; this is key to measuring and logging how the project is progressing. There are principles that help adapt the process of performance reporting to meet the needs of the project environment. If a variance occurs, there are a few ways we can respond. Understand what causes the variance and take corrective action through steps, such as adding resources, making a change in the process, coaching individuals on their performance, speeding or slowing the schedule, or reducing the scope or change request.

Another response option is to ignore the variance. This can be an option only if the variance is small, and even then it should be labeled as a risk factor. Another response option is to cancel the project altogether. This should only be an option if key assumptions have not been held or if the critical success factors have a low tolerance

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for deviations. A final possible option is to reset baselines if the variance cannot be eliminated; if this happens performance will be measured from the revised baseline.

Ways to keep updated on how the project is doing and following the schedule is by implementing a Gantt chart. A Gantt chart keeps tasks scheduled as well as what team members are in charge of. It helps move the project across by having deadlines and making sure tasks are on track. To learn more about Gantt charts and other helpful tools that help a project's performance, refer to the Software Tools chapter.





Chapter 5
Closure

Jonathan, Daniel, and Amanda run a market research firm in Seattle Washington. Their firm was tasked with preparing a financial feasibility investigation for expanding the YWCA's facilities in downtown Seattle for the city's planning committee; an idea that had been gaining momentum within the city limits, but had little weight behind it outside of Seattle. The group met and discussed tasks required for completion, split up the work, and busied themselves for weeks. After a month of exhaustive study and financial analysis, the report was completed and pats on the back were distributed among the team members for a job well done.

One minor task was overlooked, however. The project was not delivered to the city planning committee, the body tasked with overseeing feasibility investigation. A presentation was also requested by the fundraising committee within the YWCA

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that was ultimately responsible for the idea, but was accidentally put on the back-burner and forgotten by Jonathan and his firm. With the financial quarter already over and almost everyone out of town for vacation, Daniel attempted to deliver the desired documentation to the planning committee, but arrived 30 minutes after the department closed due to traffic. His firm had completed all of the work and now would not be receiving any compensation because of a failure to deliver.

Like a deflating hot air balloon, a good project must carefully and slowly close itself down if the desired ending is to become a reality. Small but essential pieces of a project - overlooked, or pushed back and reserved for the end - can just as easily sink your ship as large pieces. This can lead to a project being terminated due to a breach by one or more parties. In order to effectively finish a project, the goal has to be the focus from the start. It's no good to worry about finishing tasks without having a good idea of how you're going to stick your landing and deliver your product; if you do you're going to wind up like Jonathan, Daniel, and Amanda, with little to nothing to show for your efforts. In this section, we will discuss the different ways a project can close, what is involved in an effective closure, and how the aftermath of a project can be played in a way to maximize the project's future utility.

Steps involved in Project Closure

Obviously everyone wants the projects completed and have our work appreciated. This indicates the hard work you and your team has completed was of sufficient quality to satisfy your customer's needs. But what is needed to effectively close a project?

First and foremost your projects contents must be compared to your customer or client's outlined requirements/desires, as well as your initial goals. Have you met them? Has your team come up short? Are there major differences between your initial outlined goals and the different versions that were adopted while the project was completed, and have these differences been scrutinized and compared to the client's original request? There are a million ways a project could go wrong, and often they can be attributed to internal or external factors that are outside you and your team's control, but the biggest and most common one by far is when a team loses track of what they were originally tasked to complete. Think back to projects you have done in school or work, and remember those that went poorly. Did they do poorly because a key player didn't pull their weight? Was it because of an uncontrollable external event like a medical emergency? Most likely it ended poorly because your team became caught up in their own productive energy and lost track of their original direction. It's important while working to keep your eyes on the prize, but it is doubly important to check and recheck your initial tasks when submission of your project is being considered. If your work is closely aligned with the client's requests and your own goals, move on to the next step.

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Once it has been decided that your work is at an acceptable level of completion and is on track with its initial tasks, it's time for your group leader/manager to collect and compile project documentation. It may seem like a pretty obvious step, but you wouldn't believe how many projects trip up by not properly gathering and arranging data. Imagine building a house and handing the customer a pile of framing boards and drywall. You may have all the material you need present, but it has to be arranged in an aesthetically pleasing and functional way. If this role was not considered from

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the start, you may compensate by assigning the job to a team member who has design aspirations. Only a true artist is able to bring all the different pieces of a project together into a picture that everyone can understand and easily interpret. If you are presenting your project, consider having one of your presenters also compile the data. This will further familiarize them with the final package your client is receiving. Once you have packaged your project, you're ready for the third step.

Ready to move on to bigger and better projects? Hold on, partner. Now that you have verified that your project is finally completed, it's time to wave bon voyage to your work and move into the administrative processes. In the corporate world, the third step involves notifying your client of formal acceptance. Perhaps a better description of this is formal notification of completion. In a classroom this will look something like shambling into the lecture hall the final day and plopping down your report and flash drive in front of the professor before collapsing from exhaustion; in the real world it's much more involved and often a bit tedious. The project manager or group leader, whichever term you prefer, will write up a formal letter that the project has been completed. The letter will outline the client's requirements and how you and your team have met those requirements in broad terms. The trick here is to stay away from specificity and let your material and presentation speak for itself. The final step is delivering the product to your client. In the non-business world, you may think that the process is a lot less involved and more laid back, and this is not entirely wrong, if you build a fence for a neighbor, you aren't going to submit a formal letter of completion, but in every project there is always the crucial final step of actual notification. In all settings you will find there is some sort of process involved with communicating that the final "tick-box" has been checked. Some scenarios will be strict about this.

like working with an investment bank with the goal of going public, and others will be more relaxed, like notifying a zoo of some finished pave work. Whichever environment you find yourself in, it's important to know what will be expected of you.

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Step four involves closing your project down internally, and is referred to as administrative closure. This process involves the project manager notifying the branch or company that is ultimately responsible for the project that the assets tied up in the assignment are ready for redistribution, this could include things like expense accounts or a cement mixer. Your manager will now know that any assets your project has been using can now be tasked to a new assignment. This is largely out of the team and the team leader's hands after notification, but it is important that whomever you are working for be aware your team is effectively sitting around twiddling their thumbs.

Step five is a financial audit of the project's expenses. You and your teams' purchases and total allocation of funds will be carefully scrutinized by your company; this isn't an issue in the classroom, but will be a common occurrence in any corporation or real world setting. Successful groups always know where their money is going, whether you're working for Amnesty International or your dad's lumber yard. Thankfully as long as you have been mindful with your expenses and usage of your company' monies, you shouldn't have a thing to worry about. This will probably be performed by an accountant or team of accountants specializing in auditing, even from within your own firm, but it could be as simple as your supervisor noting all saved receipts. It's important to be aware that something like one of the previous two scenarios will happen; however it is easy to view the money that has been distributed to you as being your play money.

Step six involves properly archiving your project's information. From expense reports to PowerPoints, your firm or your college career will benefit greatly from keeping your data around in a form that is easy to access. This will be examined further in the following section, but suffice to say it's extremely important that this step be performed with the proper care. Data can be easily corrupted or lost if you are careless, and whether it's at a university or at Apple, there will be consequences if you lose the data.

Step seven is a complete review of the overall project and attempting to learn from your mistakes. This isn't particularly likely in a classroom setting, but will happen in any decent sized corporation or government branch. It's important for your team to evolve and become more able to handle previous hurdles that threaten your projects. The only way to do this is through slow and methodical scrutiny of where your project faltered and why. This is not a moment for pride but for careful self-examination. Ask yourself: when the expense reports were a week late getting out, what could I have done to mitigate that setback? If I had been aware that my shipment would have been a week late, how could I have reassigned my employees to better utilize the time? The old adage about hindsight being 20/20 may come to mind, and the group that examines its mistakes and learns from them will be able to operate more efficiently and effectively in the future. Think back to a time when unexpected inconveniences arose while preparing a project in school. Think carefully about how you could have avoided or mitigated the negative repercussions. This recollection and reexamination of events is all a review will involve, so don't sweat it; take it seriously and learn from your mistakes.

If you are a project manager, the final step can be a bit hair-raising. In all environments where you are working with other people, peer review will come up time and time again. You will be asked to accurately and without bias examine and review your peers or subordinates and their performance. This will involve both negative and positive aspects, but it's important that you be honest. While your fellow project members may be your friends, you have a higher duty to the people you work for and your ethos. Lying about how well a friend did on their part of a project may help them in the short-term, but in any setting their performance will be rewarded with further responsibilities, which can push them into situations that they are not prepared for and set them up for even greater falls later. It's better to tell the truth earlier and let others deal with how the truth is used.

Project Termination

One way or another, all projects come to an end.

Preferably this is done through completion of the agreed upon duties, but sometimes extenuating circumstances arise prevent this from becoming a possibility. Here are several ways in which a project can end:

Completed: This is obviously the desired outcome. All of the agreed upon contractual agreements with the client have been fulfilled, and everyone walks away happy.



Canceled: The project was canceled by your client or someone within your firm. This could be for many different reasons: from poor performance on you and

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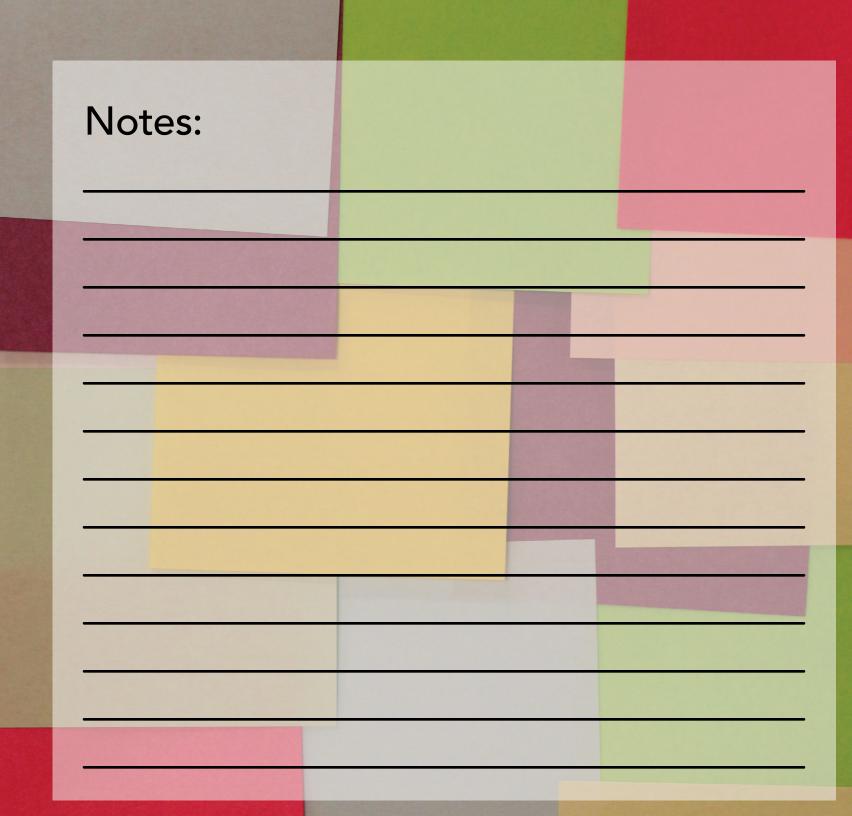
your team's part to more efficient resource allocation. While it may be somewhat disheartening to not finish your work, it isn't always related to your team's effort or capabilities. Often life throws you an unavoidable and unforeseeable curve ball.

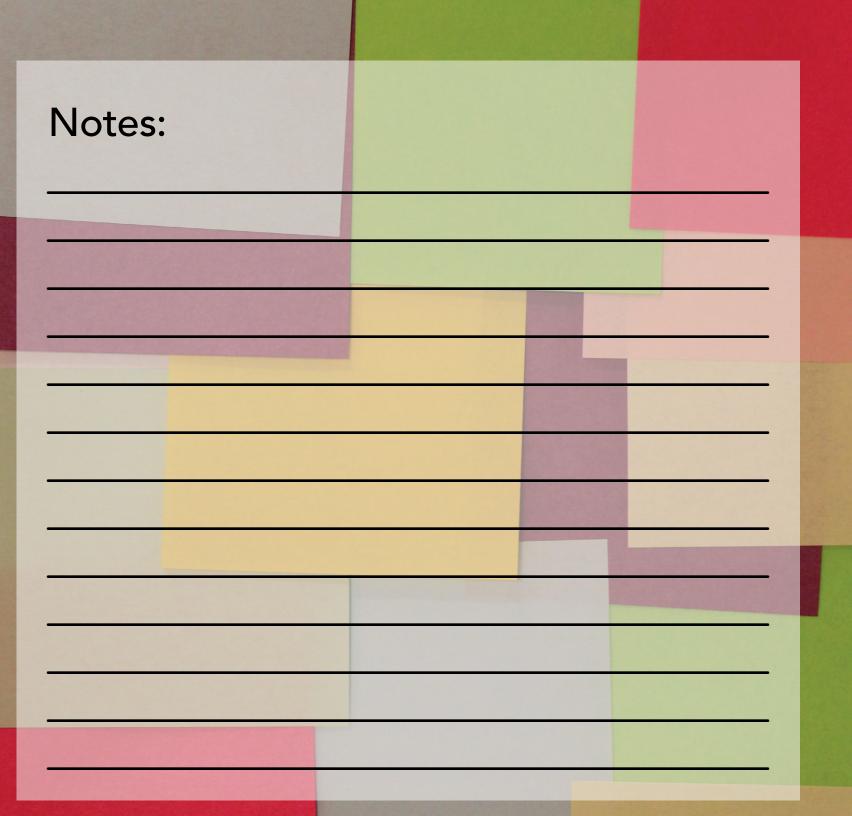
Displaced: This is where the work your team has completed or will complete is deemed obsolete by other existing projects. Maybe another car company has produced a vehicle with a drive system your R&D team is only just now finishing up, or a new law makes your legal team's research no longer valid. Things can happen that make your work meaningless, and your project team must be aware of this.

Collapsed: This is where uncontrollable external forces cause your project to be canceled. This could be anything from a natural disaster to your department being dissolved. Rarely related to your efforts, they are often cataclysmic. A fire on your construction team's job site that burns your work to the ground, for instance.

Absorbed: This occurs when your project is brought in to a corporation as a whole new department or division. This is one of the ways a project can live on past its completion date, which will be discussed in more detail later, but it isn't uncommon for a project to be bumped up into a more mature and long-lasting form.

Deteriorated: When funding for the project is slowly reduced and it dies a slow death. This can happen directly because of your team's performance in a small company, but is usually the result of a larger underlying issue in your branch.







Chapter 6 Aftermath

Could I ever need this Material Again in the Next Month? The next year? Think about how long you might need the documents related to your projects and then double that time. Maintaining files or documents is easy. Having to redo the work is not.

Could anyone who follows after me use this information?

Remember that at some point someone else may have to do your job, and having your project's files around can make their jobs much easier. This can be done through proper archiving, but also through explaining your archived data to those that follow after you. Remember that on your way up

you will have to look to those below for support, and they will be much more willing if you are professional and helpful in making their jobs easier.

Is this information sensitive?

While in school you may not mind your files being cracked open and read, but the company you later work for will. Consider how your materials are being stored every few months. Verify their integrity constantly; it may seem like a constant headache, but remember that you could be held liable for sensitive material being lost or stolen. Working to maintain your project files in a stable and neat platform should be on your mind at all times. They must be properly archived when closing, and their integrity checked on every few weeks. When considering how best or how long to manage and maintain these sorts of files, certain points must be considered.

Every project must end, but not every project aftermath is going to be the same. In the same way that people can live on through their children, and their children's children, so to can projects live on by having "offspring". This can vary wildly, however, by the different fields that the project occurs in. Here are a few to provide examples.



Business

You and your project team within an investment firm have just spent the last 6 months creating a complicated statistical model that will calculate the fluctuation of

several different stock tickers and compare them in a variety of ways. Your project is completed at this point, but because the project went over so well and corporate is so impressed with your results, they have decided to create an entire department around your model and promote you to the directorship. Your model is capable of being changed in subtle ways and reused, and you're quickly busy in your new role.

Government and Non-Profit

Your project team of which you are an integral member just completed a proposal for a community health clinic for your local city. The project is examined and approved by the municipal authorities, and your work has become a healthcare facility as well as a template for any future facilities within the city.

Education

Your local elementary school seeks to implement a new teaching device that incorporates several different technological elements. Since you have experience in project management, you leader a few different parents in creating a proposal. The proposal is approved, and you and your team are asked to form a PTA project completion team within the school. Your proposal and the format are used again and again by you and your peers.

Healthcare

A project team has been tasked with creating a new form of checklist items for surgeons prior to beginning surgery, in order to cut down on mistakes. The checklists are short and to the point, and your surgeon's mistakes begin

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to drop as they become comfortable with checking essential items against your lists. Your hospital has found enough value in your surgical checklists idea that they begin to implement checklists throughout the hospital.

When performing projects in any setting the project must often be pre-approved by a committee or your professor. This can be stressful, as often you have already committed many hours into simply preparing a project for this event before even getting the go-ahead to really get started. Here are a few useful steps to consider and perform in the aftermath of your project being denied by your oversight person/persons.

First you should carefully examine the reasons why your project was denied. While the reason is sometimes outside of your control as the project manager, you would not have been tasked with creating a proposal if a projected was not deemed necessary, and often you will compete with several others for your firm's approval and funding. On the off chance you were not approved due to uncontrollable circumstances, grit your teeth and press onwards. If the group responsible for approval noted several shortcomings with your proposal the final effort involves examining these and modifying your proposal accordingly

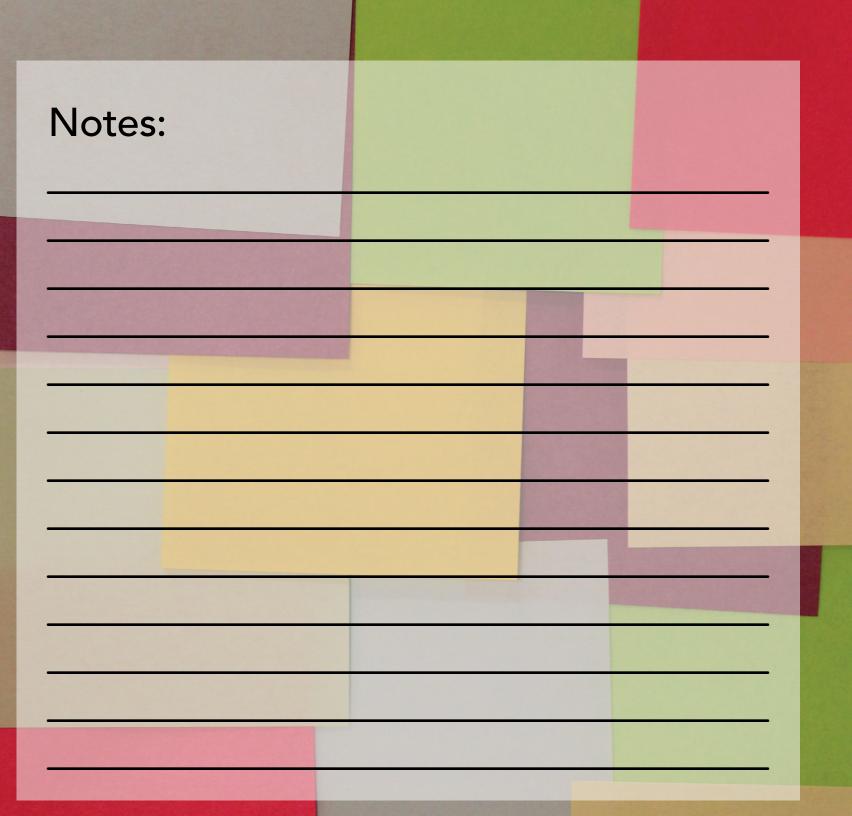
One of the biggest efforts that will be followed after a project has ended is learning from your mistakes, both as a team or as an individual. Covered in the last section, revision of methodology is a key moment in a project's aftermath. This revision should not occur without strict source documentation,

in order to prevent further mistakes being made down the road. Here are several different sources from which these revisions can be pulled.

The biggest source for documentation in relation to methodology revision will be your project's change log. Each change to the project, be it large or small, should have its own entry in your project's change log.

Written notes of any form that were made while the project was completed will be invaluable. They will provide a window into the past, allowing you as the project manager to remember clearly the emotion and thoughts behind any frustrating or insightful moments.

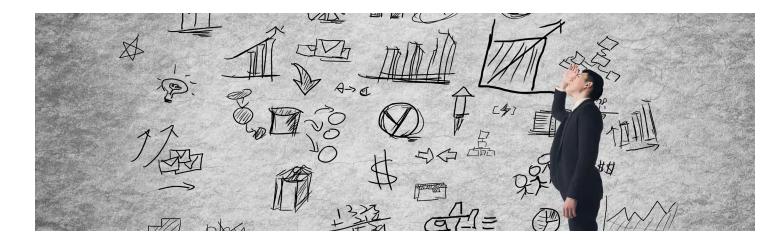
Concluding the Project Management Process. After reading through the previous sections on initiating, planning, executing, controlling, and closing a project, you probably now have a decent idea on how to successfully start, work-through, and finish managing a project. It won't all come back to you in some sort of rush, but the information should provide a decent groundwork for you to go out and acquire the most important piece yet: experience. Nothing in any book anywhere will ever beat going out and completing projects on your own or with your peers. With a little bit of help from this book, however, you can rest assured knowing that you will be better prepared to come to the project management table with a good eye for the important factors in any project.



Software Tools

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Chapter 7 Software Tools



One of the common weaknesses in a project manager is a lack of knowledge in how to use scheduling software. If you truly want to succeed as a manager and move on to bigger projects, knowing how to use software designed to help plan and organize your project is an absolute must. The details of project planning such as budget, determining what needs done, estimating work, deadlines, and allocating roles and responsibilities can all be done using computer software. There are several different categories of project management software including mind maps, Gantt charts, and milestone charts just to name a few. Mind mapping is used to determine exactly what needs to be done by breaking the project down into categories and then tasks within categories. A Gantt chart takes all the tasks outlined in the mind map, and creates a timeline for completing events. The Gantt chart can also be used to estimate work hours, expenses, and show how any delays effect the overall schedule

of the project. A milestone chart is similar to a condensed Gantt chart because it shows all of the major deadlines. While a Gantt chart shows the deadlines for every intermediate task, a milestone chart shows the start and finish of the major parts of the project. In this chapter you will learn about some of the various programs for mind mapping and Gantt charting as well as some of the best projects to use them for.

Mind-mapping

Mind mapping is a great way to get your creative juices flowing when starting a project. It can help you generate ideas quickly and organize your thoughts as they come. A mind map is a way of visual thinking; the structure of a

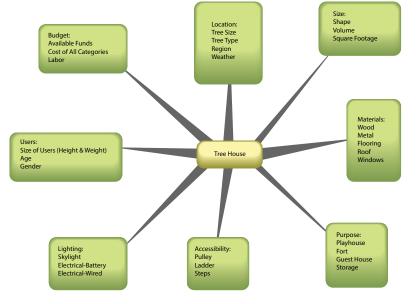


mind map is much like a spider web with the core goal of the project at the center. Coming out from the core goal are branches to the main factors or categories of the project. For example, budget and materials are two typical main factors in any project. Next you can branch off again, or list the key components and tasks for each of the major factors. For instance if one of the main factors in building a tree house is materials, then underneath materials we would list the materials required such as wood and fasteners. As you can see, using a mind map starts your project in the macro domain and takes it to the micro domain where every little detail can be accounted for in a very free flowing visual way as seen below.

The mind map also helps show how all of the steps are connected and where pieces could be missing. This could help prevent future issues by finding and solving a problem before the project ever starts. Mind mapping is especially helpful for people who are right brain dominant. These people are more visually oriented and may find it easier to connect ideas when looking at a mind map than a traditional outline; this could broaden the understanding of the project for all stakeholders involved. While mind mapping can certainly be done by hand, there are a lot of computer programs that can aid in their production. Below is a list of three widely used mind mapping software ranging from free and easy to use, to expensive with a steeper learning curve.

Bubbl.us

An online mind-mapping program, Bubble.us is used by respected universities such as Stanford and University of California Berkley. Sites such as Lifehacker.com and SolutionWatch.com also recommend it. You may operate this software system online for free to create three



mind maps before being asked for an additional fee. When you get to the website click on the "start brainstorming" button and from there you can start right into drawing your map. Even though the site will ask you to sign up before you can save

your work, you won't be required to pay as long as you stay within the 3 mind map limit. This software has hints that will walk you through getting started, and it takes no more than five minutes to learn all of the basic functions. If you pay to upgrade your account, then there are other options available such as importing. However, the program is functional without the upgrade. They also have an Apple app so you can access and edit your mind maps on your iPhone or iPad. This is an intermediate level program that anyone can pick, making this software ideal for beginners.

1. Pros:

Free access (limited)

Easy to use

Apple app

Option of creating an account and saving your mind maps

2. Cons:

Must pay for full access

A maximum of 3 mind maps per free account

App not available for Android

3. Instructions:

Instructions given in mind map software

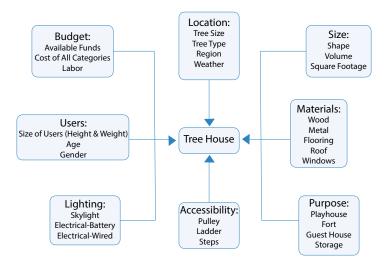
4. Best used for:

Small projects or brainstorming sessions

Someone without much experience using mind mapping software

Edraw

Edraw is flow-charting software that has been around since 2004 and is used by major companies such as IBM and Dell. Edraw software has a very similar interface to Microsoft Visio; however purchasing Edraw only costs around \$50, whereas Visio can be up to \$300. This software can do a lot more than Bubbl.us such as creating floorplans and complex diagrams as well as



creating calendars, Gantt charts and schedules. The software in this program is a little more difficult to learn, but a rudimentary understanding of the software can easily be accomplished in a day. Using and investing in this software would probably be most advantageous for small businesses and groups working on small projects.

1. Pros:

Inexpensive software

Moderately easy to use

Wide range of uses

Trusted company, has been in business over a decade

2. Cons:

Must pay for software access

Some knowledge of basic office programs required

No other programs are designed to interface with Edraw

3. Instructions:

Instructions given in tutorials online

4. Best uses for:

Small businesses and small project undertaking groups (low stake, low income organizations)

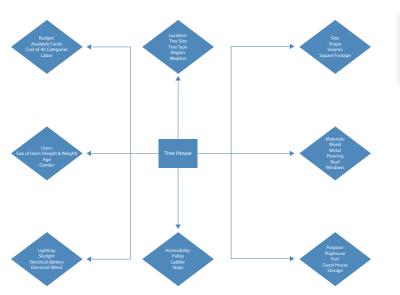
Someone interested in solid flowcharting software at low cost

Microsoft Visio

Visio is a Microsoft Office partner that can do a wide range of "drawings" from simple flow charts all the way up to complex floor plans. Visio is a versatile program that can be molded to do a wide range of drawing related diagrams and charts. In fact, there are even Gantt chart and calendar templates available. Visio is accepted as the most useful flowchart drawing software on the market. Visio is considered

"king" because Microsoft is its creator, and Visio cooperates very well with all other Microsoft Office programs. The competitive edge with this software is that it can be purchased in a bundle of Microsoft Office programs that most businesses already need. The lower bundled price can help justify buying the software whereas if purchased alone Visio can cost up to \$300. Visio is the perfect software for bigger businesses and entities that do large or important projects. Visio has the potential to

make a very clean and professional looking chart that will impress and captivate stakeholders; however, Visio does require a little more education to operate it. Users would be best apt to mastering Visio if they first have a solid understanding of other Microsoft Office programs. As seen in figure 4, this is a very simple rendering of a mind map of our tree house example.



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1. Pros:

Very powerful and multi-functional software

Microsoft Office interface, a part of Microsoft Office program family

Industry standard

2. Cons:

Must pay for software access, relatively expensive Knowledge of Microsoft Office programs required

3. Instructions:

Instructions given in tutorials online and through Microsoft

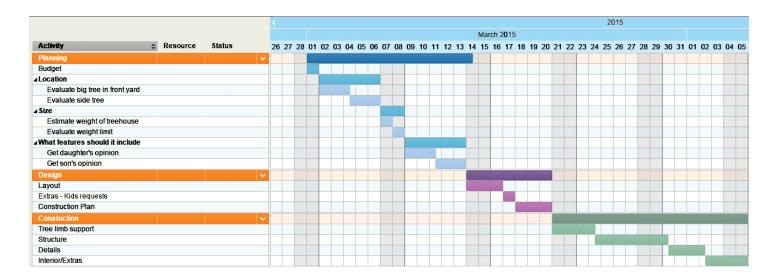
4. Best uses for:

Large businesses and organizations dealing with large, high-stake and important projects

Entities that demand the highest quality of a project design

Gantt chart

A Gantt chart is what a lot of people think of when they hear project scheduling. There are many ways a Gantt chart can help with project management, but not



all programs are equal when it comes to tracking a project. Some programs focus mainly on the schedule and task assignment aspect of Gantt charts whereas others take into account the budget, pay rates, and estimated number of hours to accomplish a task. For a small project that doesn't have a lot of cash flow, a simpler Gantt chart would be the best. A more complicated project with a lot of cash flow and a lot of people working on it would definitely benefit from a more advanced Gantt charting program that could keep track of all the factors. One of the beauties about mind mapping and Gantt charting is that once you finish the mind map you can use those categories to create your Gantt chart. Some programs will allow you to import your mind map into the Gantt charting software and it will automatically create a basic chart off of your mind map data. The combination of these two tools can be extremely powerful when you know how to do it correctly.

Tom's planner

Tom's planner is a good free Gantt charting program for simpler projects you may have. It doesn't have the capability to do a lot of the more complicated tracking such as if the project is staying on budget but it can do the basics. You can make categories, subcategories, and lists within the categories. Then those categories can be assigned a time-line and a resource to work on that project. If you add additional columns you can also assign a risk level to each category so it is easier to track those tasks that are "make or break" for the whole project.

Chapter 7 – Software Tools 79

1. Pros:

Easy to use

Search tool to easily find specific tasks

Free access (Limited)

2. Cons:

You can only make one chart per free account

You can't export or print your chart without a paid account

Each time-line has to be created individually

3. Instructions:

Click the "I" button at the top of the Gantt chart to read the manual

4. Best uses for:

Small projects

People without a lot of Gantt charting experience or knowledge

Gantter

Gantter is a cross between Tom's Planner and Microsoft Project when it comes to capabilities and features. When looking at the blank chart it looks very similar to Microsoft Project. Once you figure out how to use the program the input is a lot easier than Tom's Planner, however there is a steeper learning curve to begin with; it takes some preliminary learning on how to input commands and position items where you want them. One of the issues I ran into when working on the example tree house Gantt chart was it wouldn't let me start a project on the weekend. To change

that I had to go into the properties window and change the calendar type from "standard" to "24 hour." This solved my problem of being able to schedule stuff on the weekends but it started planning things by the hour so when I input a start date and end date it would say the estimated time was 7.13 days. To sum it up, Gantter has a lot more capabilities than Tom's Planner but is more difficult to figure out.

1. Pros:

Free

Ability to track dependencies, show work progress, and highlight the critical tasks Can be opened and shared in Google Docs.

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Budget	03/01/2015	03/01/2015																											
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Construction plan	03/18/2015	03/20/2015																											
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Structure	03/24/2015	03/30/2015																											
Details	03/30/2015	04/02/2015																											
Interior/Extras	04/02/2015	04/02/2015																											

2. Cons:

A noticeable learning curve for new users

Not as well designed as Microsoft Project

Not very compatible with the iPhone or iPad

3. Instructions:

YouTube

Gantter.com

4. Best uses for:

Projects in which budget tracking and scheduling are important but purchasing Microsoft Project is too much money

Microsoft Project

Microsoft Project is one of the big names when it comes to Gantt charts, and it definitely deserves the attention it receives. When tracking a project there's not a lot Project cannot do. It can track hours worked, multiply that by a worker's hourly wage, and predict how the time spent on that piece of the project will affect the bottom line. If you experience a delay it will show how that delay is going to affect the end deadline and any other milestones you have set in place. If you have the budget, MS Project can be an invaluable tool when it comes to project management.

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1. Pros:

Extremely powerful with lots of features

Compatible with Office 365 and other Microsoft products

Widely used

2. Cons:

Expensive

Complicated to learn

Compatibility issues with other programs and even other editions of Project

3. Instructions:

Books

Online instructional guides

YouTube

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4. Best uses for:

Broad scale projects with lots of factors

Those who have had previous Gantt charting experience

Programs

Project Management involves keeping track of many different things at once. There are many programs out there that can help tremendously with organizing and keeping track of every aspect of a project. While Gantt charts are a great tool for scheduling, estimating work, and budgeting that is only a small part of a project. Every project has information that needs to be shared with others in the group and sometimes email just doesn't cut it. If an issue comes up and is communicated to the Project manager then the manager must communicate with the rest of the group which can sometimes get tedious. Project management dashboards are designed to create a central location where team interaction can take place. Documents can be shared throughout the group, discussions can be posted, messages sent, and to do lists made. A centralized location for all of the project information makes things easier to find and saves time when finding necessary documents, or gathering information. I know from personal experience that it is very frustrating to work on a project where some documents are online

while others are only accessible from certain computers. Having all information online where everyone can view it helps to keep the project running smoothly.

Basecamp

Basecamp is one of the most well-known and widely used project management dashboards available on the internet. In 2014



it helped over 350,000 companies and completed over 4,000,000 projects. The company has to be doing something right if they have that many people willing to invest in their product. One nice thing about Basecamp is they actually offer a 2 month free trial so you can see for yourself what all the hype is about. I must admit that when I first logged on and took a look at their sample project, the program was very impressive. It has a spot to share project documents, create discussion threads, view the to-do list, and a personalized home page that will let you know what your responsibilities are at the moment for all of your projects on Basecamp. You can be working on multiple projects at the same time and Basecamp will keep track of your responsibilities for all of them and display them in your "me" page. Basecamp is also compatible with a lot of other programs such as Gantt charting programs, Apple apps, Android apps, and others. With all that you have pretty close to a perfect package.

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1. Pros:

Very user friendly and easy to learn

Free 2 month trial

Compatible with many other apps and programs for PC, Android, and Apple

2. Cons:

You can only do one project in the free trial

It costs money based on the number of projects you plan on doing and the amount of storage space you need

You can only view or edit one project at a time

3. Instructions:

Basecamp.com

YouTubwe

4. Best uses for:

Any kind of project that can be done in less than 2 months or that can afford the monthly fee to have an account

Wrike

Wrike is another one of the major names when it comes to project management software. In fact, Gartner named it a "Cool Vendor" in social software and collaboration for 2014. Major companies such as PayPal, Adobe, HTC, and even MTV use Wrike for



their projects. When looking at the start up screen when you first log on to Wrike it looks a lot more complicated and less intuitive than Basecamp; however while the learning curve may be a little steeper, some companies find that Wrike offers more when it comes to managing multiple projects. While Basecamp is compatible with more applications such as MSN Messenger and WordPress, Wrike makes it easier to manage and keep track of multiple projects at the same time. Also their pricing system is different; Wrike charges by the number of users on the company account whereas Basecamp charges by the number of projects on a company account.

1. Pros:

Fully supports inter-project dependencies Cost effective if you have only a few employees but many projects Free trial (limited time of 2 weeks)

2. Cons:

Compatible with a limited number of programs

Cost

The learning curve

3. Instructions:

In the free trial there are some guidance posts

Wrike.com

Youtube.com

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4. Best uses:

Companies with lots of projects but few employees

Domo

Domo is a well-known project dashboard software that combines all of your data in one easy to use, intuitive place. Connecting any source of data with Domo is good at including spreadsheets, cloud based apps, on premise, datawarehouses, databases and social media. With Domo, you can quickly display months of data



from multiple different sources on one page. This software is great for combining figures and displaying them all in one place, simplifying the process of share your points and agendas across large groups or organizations. Another bonus for Domo is their mobile and tablet apps. However, while the basics of Domo are easy to understand, to use the product to its fullest will require some time and

training for specialized users such as people in the positions of CEO, marketing, or operations. This software is likely to be used on large projects for big companies.

1. Pros:

Very intuitive platform

Connects to almost any source of data

Customizable dashboard

Compatible with many other apps and programs for PC, Android, and Apple

Allows everyone to be on the same page, software sharable

2. Cons:

Requires some training or prior knowledge of Domo for more complicated features

Domo is on a subscription pay scale depending on your use

3. Instructions:

Domo.com/learn

YouTube

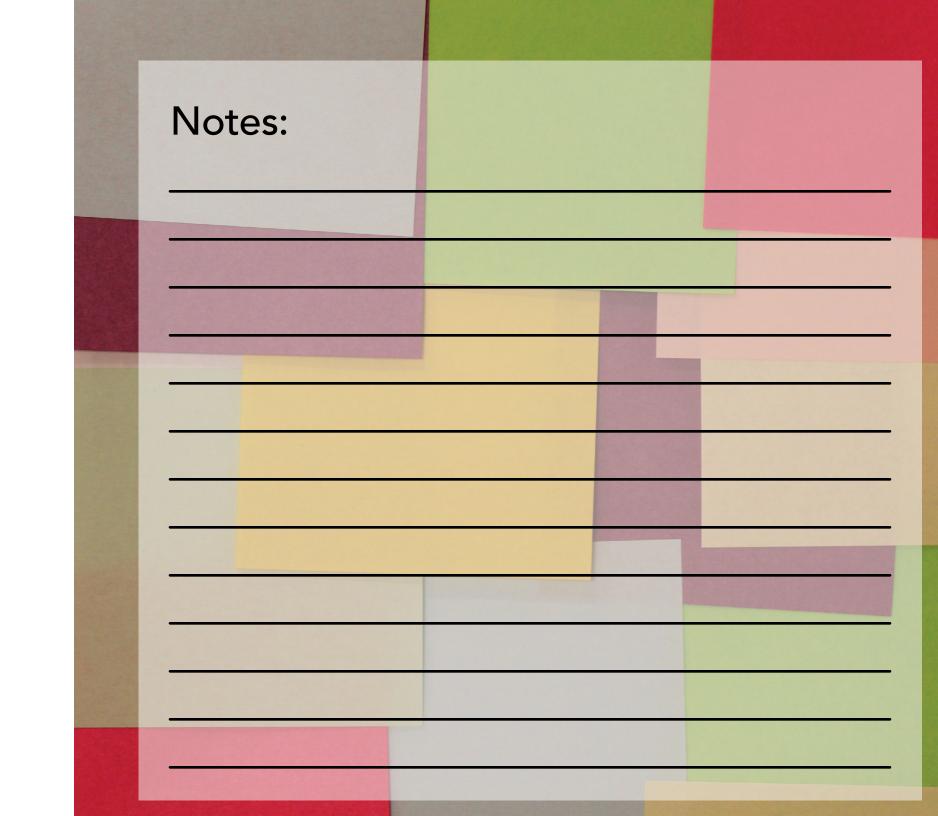
4. Best uses for:

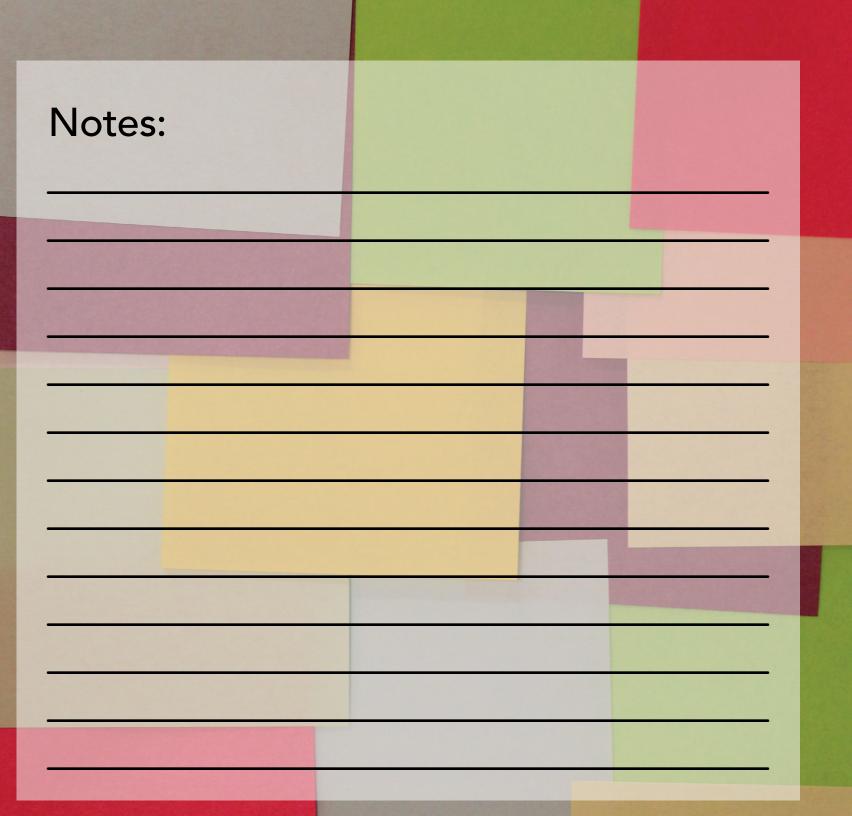
Large organizations, businesses and projects

Honorable Mentions:

- 1. ActiveCollab
- 2. Assana

- 3. FreedCamp
- 4. TeamworkPM
- 5. SmartDraw
- 6. Flowcharter
- 7. Gliffy
- 8. Creately
- 9. Cacoo
- 10. RFFlow
- 11. Lucidchart
- 12. Edge Diagrammer
- 13. Agile Agenda (Mac)
- 14. Ganttic
- 15. Liquid Planner
- 16. Open Project`





Organizational Behavior

• Chapter 8 Organizational Behavior

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Chapter 8
Organizational Behavior

Project Management is an intricate and detailed process that teaches an individual to plan and control a project from start to finish. Many project managers are equipped with the tools to do so but lack necessary people skills to effectively manage the team. Consider this scenario: you have been chosen to lead a group of people on a new project for your company. You know that there are representatives from each department on your team; most of them being people you've only met in passing, but now they report to you. Where do you begin when getting these people to work together? How do you make sure they are committed to your project? How do you motivate them to stay on task and reach set goals? How do you deal with conflicting personalities? The answers to these questions can be found through a study of organizational behavior.

When most people think of project management they think that it's a group of people coming together for a one time task. However, too often overlooked is the fact that the people who you're working with have an important impact on the quality of the project. Organizational behavior is an analysis on how all the pieces of an organization fit together and how to best utilize these pieces. A project manager's task is to manage all resources; this includes individuals who report to them. They need to be able to make sure they are committed to the project and detect those who aren't. They have to find ways to motivate those who they work with and tailor it to the individual. Project managers will need to have an understanding of the different personalities and how they interact with each other so that they can best interact with the team. If a project manager wants to be successful, understanding these key concepts of organizational behavior is essential.

Organizational Behavior

When you first see the word "organization" used in learning material, many people jump to the question of "How does this apply to me? I'm not a part of an organization". And they are right to do so; the point of organizational behavior is not to specifically address behavior only within large companies but to address the interaction between individuals and groups in almost any work environment. This is a key reason why a project manager should take time to understand what this study is truly about.

Take a moment to think about a project that you have collaborated on in the past, whether it be in school or work. Think about the people you worked with; were there any that stood out as particularly troublesome or excellent to work with?

Take a brief moment to recall the attributes associated with those people. Have you ever asked yourself what makes an individual in either extreme to act in such a behavior? That is the purpose of organizational behavior, to study and accurately attribute to individuals what makes them behave a certain way within an organization. In project management there will be a higher focus on individual and group influences that contribute to the actions of team members. Some of the individual influences are motivation, ability, personality and organization commitment. Some of the group influences are leadership styles and behaviors, leadership power and negotiation, and also project teams which will be talked about later in this chapter.

Organizational Commitment

Organizational commitment is a subset of organizational behavior, as are most of the topics presented in this chapter. The reason this is mentioned specifically is because of the role it plays in almost every project. Organizational commitment is the analysis of people or employees and how they relate to an organization. Employees that have a high level of commitment are easier to retain and motivate while those with lower levels are more likely to have a negative impact and eventually leave the team. This is an important concept project managers need so they can understand how organizational commitment functions in the dynamics of a team. There are three types of commitment; emotion-based commitment, cost-based commitment and obligation-based commitment. These types of commitment break down the main

reasons why a team member would stay or leave a project. Each team member is going to have different types of commitment or will lack some types altogether.

Emotion-based commitment

Emotion-based commitment in short, is most easily defined by assessing how you feel about a particular situation. A good example of this would be thinking about the people who you work with in a particular situation. If you like those whom you work with or would feel that you would miss them if you were to leave, this shows that there is an emotional tie to remaining within a group. This form tends to be more difficult to identify because unless explicitly expressed it's hard to gauge. If a project manager can foster strong relationships with their team members and work towards aligning goals within the groups, they can increase the likelihood that a team member will stay with the team when difficulty arises.

Cost-Based commitment

Cost-based commitment to a task deals with the monetary or physical perks of a job that would retain a team member. An example would be a team member who chooses to stay with a project because the additional compensation allows for them to afford a nicer home or a luxury car. The team member from this example is staying with a company because of what they get in monetary compensation. This is an easier form of commitment to gauge because those who are motivated by monetary means often express or pursue them. It is important to note that not every person is going to have high levels of cost-based commitment and

therefore some team members won't be affected by it. It a useful tool to be aware of in project management but should not be relied solely upon to get results.

Obligation-Based Commitment

Obligation-based commitment relies on the sense of duty an individual would have to a manager because of what that manager has done for them. An example of this would be a team member who remains with a project because of the investment their project manager put into them by teaching them vital skills or helping them with a personal issue. This is a very difficult commitment to gauge. In the mid 1900's, it was common for people to remain within an organization for the entirety of their career. But now most people only stay with a company for five year or less as they are always on the lookout for better opportunities offered elsewhere. However, this knowledge should not deter a project manager from investing in his or her team members. Obligation-based commitment can be viewed as a game of chance by some managers but those that use it effectively tend to have positive results.

These types of commitment are the foundation for why many team members remain with a team. It's important for project managers to have an understanding of this information because it allows them to know how to best influence team members. Managers are rarely going to get along well with every person on their project but if the team member performs well, knowing which type of

commitment that keeps them around is important to maintaining quality on a project. Commitment is only half the story in organizational commitment, the other half is told in disengagement behavior.

"Most

of them

Disengagement Behavior

Disengagement behavior is something that every are unhappy project manager should be on the lookout for on each about the project team. Take a moment to consider the following news." scenario: the boss's office and told that you will be replacing a key leader of a project. This leader was well loved by the team, and you are the new hire on the team and haven't yet developed a strong camaraderie with the project team. You are tasked with delivering this news to the team; upon presenting this news at the meeting, you notice the look on the faces of team members. Most of them are unhappy about the news. After the meeting you overhear a couple of team members mention they want to quit working on the project. A few weeks into your role, you realize that several of your team members are showing up late and taking longer breaks than usual. Others, you notice, are spending more time surfing the web and watching videos of adorable kittens, rather than completing their work on time. What do you do? How do you turn the tide and get them back into a productive mode? Disengagement behavior

is dangerous and toxic to a work environment. There are two types that project managers should be aware of: inner disengagement and outer disengagement.

Inner Disengagement

Inner disengagement involves the mental process behind an employee that is pulling away from the group. Think about how an individual would be demonstrating inner disengagement. Would they be off in their own world contemplating nonwork related issues? Would they be on the computer trying to look as if they are accomplishing work? Would they spend excessive time around the water cooler talking to other employees? All of these are examples of inner disengagement, where employees are mentally removing themselves from the work that they need to accomplish. It is important for those within management to be able to identify and address these issues; while most of these are considered minor infractions, they are the beginning steps to employees leaving an organization. In this stage it would be important to identify and address why an employee is behaving like this. The manager or project leader should discuss with the employee about why they are pulling away. Having this information allows a project manager to look for ways to solve the problem and move them back towards being a productive team member.

Outer disengagement

Outer disengagement is the process of taking physical action that removes an individual from doing their work. Think about how an individual would be demonstrating outer disengagement. Would they be consistently late to meetings? Would they take longer breaks than usual; leaving early for lunch

and returning late? These are just a few examples of outer disengagement, where team members are physically removing themselves from their work environment. Out of the two disengagements, outer is considered to be the more dangerous; team members who are showing these signs tend to be on their way out of an organization and should be considered red flags by a project manager. A manager should always be on the lookout for any team member exhibiting these signs and should take immediate action. A team member leaving can have a large impact on the group and should be avoided if possible.

Motivation

Motivation is a collection of different concepts that influence an individual to want to complete a task. Some of these forces are internal, including pride in the company you work for or knowing what you do is bettering the lives of others. External forces can include monetary gains or opportunities for advancement.

All these things work into determining how much effort an employee will put into completing an assigned task or achieving a desired goal. These forces relate to an individual, but there are theories that suggest that it's not only individual aspects but an individual's perception of how the whole group is being treated, that can impact their motivation. Employees tend to look at fairness as an additional force that motivates their actions. If the work environment is unfair it tends to have a negative impact.

"Extrinsic motivation"

Intrinsic and Extrinsic motivators are two areas that most people think about when the topic of motivation arises. Intrinsic motivators come from within an individual to complete a particular task. This could be because they want to learn a new skill, believe that their abilities contribute to the cause, or belief in what they are doing benefits the society. Extrinsic motivators are outside influences that motivate an individual to complete a task and is considered the most common way to motivate team members. Extrinsic motivators would be pay, position, competition or any external benefits associated with an organization. Extrinsic motivation is likely the quickest way to achieve a desired result and the tool most managers choose to use. This does work but tends to have short term success before the effect starts to wear off. Intrinsic motivation is best used once it is determined what causes a specific individual to be internally motivated. Once this is figured out you can foster an environment to encourage them to perform a task because they want to do it. A straightforward approach to obtaining this information would be simply asking the employee. Intrinsic motivation is a complex tool that can have a lasting effect.

Input and output fairness is a form of motivation that relies on a combination of internal and external factors but specifically relates to the individual and those who they work with. When referring to input and output fairness it would be best to start with a definition. Inputs are what a team member puts into their work, such as time, resources, personal abilities, and quality. Output refer to what is received for their inputs, such as pay, status, perks within the company and recognition. When it comes to terms of fairness, most team members want to see inputs and outcomes as being equal or in their favor; then again who doesn't? If favoritism is shown towards certain employees it can cause disharmony in the workplace; this is

one area of motivation that is up to the perception of the team members to gauge whether outcomes are fair or not. It is a difficult task to accomplish especially when working with large groups. Task performance is quickly diminished when a team member believes that they aren't being properly compensated. It is the responsibility of a project manager to gauge the inputs and outputs of individuals to make sure they are fair and that they can defend any decisions made in regards to outcomes.

A challenge associated with a particular goal is it has an impact on the level of performance an individual or group is willing to output on a task. The more challenging goal (up to a certain degree) increases the level of quality and output by a group; this is because many people are unaware of their potential until they are pressed to perform. A project manager is responsible for outlining just how challenging a goal should be to achieve. The goal still needs to be within the realm of possibilities; there is a limit on how far you can push someone before they believe that the goal you set for them is impossible. An additional challenge in using the goal as a motivating factor is expectations must be clearly laid out at the start. This then gives the employees tools in which to gauge their work and how much time they need to devote to this task. This tool is successful because it instills in employees an ability to determine what steps must be taken for them to complete the task, within set requirements.

Psychological Empowerment is an internal form of motivation that is based on the feeling that the work an individual sets out to accomplish is meaningful in a greater capacity than just completing the task. Let's say that you work for a non-profit organization getting homeless children off the streets and providing them

with education through high school. The hours you work are long, often 50+ hours a week and occasionally having to come in on the weekends. Friends start to question you; "Why would you want a job that takes up so much time and seems to invade every aspect of your life?" How do you respond to them? Are you feeling low amounts of psychological empowerment and are questioning why you should stay with the company? Are you on the high end of psychological empowerment where feelings of importance in what you do makes it all worthwhile? Is there a task that you particularly enjoy doing, or do you have the ability to choose what you do from day to day? Does your understanding of how to accomplish required tasks motivate you to stay? Lastly, does the fact you are making a difference in the lives of others make you want to stay? Importance, autonomy, skill, and making a difference are all concepts of psychological empowerment.

When we talk about importance we want to consider the way a team member values the work being accomplished and the reason it is being done. If a team member finds a high level of importance in the work that they are doing they are more likely to perform at higher levels and put more effort into the project. This will also continue to motivate them when they are asked to take on additional work for the project. If a team member has a low level of importance associated with the project they will pull back from the project and focus on unrelated things.

Autonomy is an important aspect to consider for an individual's engagement in their work. This allows for team members to evaluate for themselves the work that needs to be done and how best they can complete it. Team members that are given a high level of autonomy are able to choose

the tasks that they want to accomplish and how they want to get it done. This is a strong source of internal motivation for employees because it allows them to accomplish tasks that they find rewarding for themselves. Team members that have a low level of autonomy often feel that they have to use a checklist for getting the job done. These individuals will produce lower quality work.

Ability and skill levels are important attributes to be taken into consideration. Most team members have an increased sense of satisfaction with a task if they perceive the skills they have are essential to completing the task. Team members with a high level of skill like to take on tasks that utilize their strengths. They enjoy the challenge but like to receive recognition for the tasks they have completed. Employees with low skill levels tend to feel the job that they are doing can't be done by them or the job could be done by any other person in the room.

The sense that an individual is making a difference is a belief that what they are working on is achieving some bigger picture or purpose. Going back to the example stated at the beginning of this section with reference to a non-profit organization: if the individual felt the work they were doing played a major role in changing the lives of those children, they would be very committed to the project. With such an organization, it is very easy to see how someone might have that feeling. But making a difference is more than just the feeling; it is also the sense that forward progress is being made. This is how it applies to project management; not every project is going to have such easy connections for individuals to feel like they are making a difference.

All these aspects of psychological empowerment are important to consider. A successful project manager will find ways to implement a combination of these factors to help motivate team members. In many fields intrinsic motivating factors are often overlooked but if an understanding and implementation of these factors can be implemented by a project manager, the quality and efficiency of the project can greatly increase.

Personalities

Personalities are a complex and unique aspect to each individual that you come into contact with. Understanding different personalities is essential to effectively interacting with team members but there are a variety of tests and organizations that use different methods to measure this. The question then becomes: which one should you use to help gain an understanding of your team members? Through conversations with project managers, it has become apparent that one of the easiest and most accurate tests is the four temperaments personality test. The four temperaments are the Choleric, Sanguine, Phlegmatic and Melancholy. These four temperaments serve as a basis for understanding those who work in your project team. Having this understanding can be extremely useful for a project manager to have when deciding how best to interact with individuals on their team.

The Choleric personality is centered on the idea of power. Otherwise known as the worker, choleric strengths lie in controlling, being dynamic, decisiveness and goal-oriented. Cholerics can have a tendency to be outspoken, bossy, impatient and domineering. These are your "go getters" and some of the hardest workers that you will come across. Cholerics have an impressive

desire to achieve the goals set forth on any task and are always working to accomplish them. Many people tend to follow cholerics because they are naturally motivated to get things done and are quick to make decisions.

Sanguine people are centered on the idea of personality. They tend to be known as the talkers, sanguines are fun loving, optimistic, animated, excited and tend to be the life-of-the-party. A few of the shortcomings of sanguines are that they are often undisciplined, forgetful, eager for credit and sometimes too talkative. These would be your motivators in a group of people. The energy they produce is attractive and will often inspire others. They are creative and artistic, tending to be you're outside the box thinkers; these often develop new and creative ways to address challenges that are faced. Sanguines are concerned with the people around them and are quick to build relationships.

The Phlegmatic is centered on the idea of peace. They are otherwise known as the mediator; they are considered to be easy-going, calm, relaxed, patient, inoffensive, quiet yet witty. Phlegmatic people struggle with being motivated, unenthusiastic, and indecisive, and are sometimes eager to just sit. These are the individuals that are most likely to roll with the punches and keep a level head in the work environment. Their focus is on the rules and the way things are traditionally done meaning that they have a practical approach to accomplishing their work. A Phlegmatic's calm and easy-going personality makes them one of the easiest types of people to get along with.

Melancholies are centered on the idea of the perfection. They are considered the thinkers; Melancholy's strengths lie in sensitivity to others, creativity, analytics,

and order. Some of the challenges to melancholies are that they tend to be moody, negative, socially insecure, easily depressed and severely introspective. These are the individuals that would be considered perfectionists; they want to get the job done right the first time. When it comes to decision-making they tend to be slower due to their constant analysis of the situation and their desire to make sure they are making the right choice. Melancholies will keep their focus on the task in front of them because they are primarily concerned about the present.

Now apply the four temperaments to projects. A basic understanding of the four temperaments can greatly assist you in dealing with individuals within your team; being able to spot Choleric, Sanguine, Phlegmatic and Melancholic personalities will help a project manager in assigning tasks, responsibilities and dealing with conflicts that arise.

Your cholerics are going to be those who will assume or desire important tasks because they want recognition and should be allowed to take them on. They work hard and will keep your team moving forward. They may want to be in a leadership position, and if they are capable than this shouldn't be an issue.

Sanguines are bursting with energy and creative ideas but often don't follow through with them because they can lack in strong commitment. Sanguines benefit from having their creative ideas focused on particular aspects. Allow them to be who they are but guide them down the right paths so they stay focused on the goal. Sanguines are also strong backstage managers. They help the flow of the project move along from the sidelines and assist the manager, but are weak in an actual leadership role.

Phlegmatics are known for their reliability and level-headedness. They have the necessary people skills that other temperaments lack to be peacekeepers in the group. Outside of this, phlegmatics' practical approach to how things should be done makes their ideas easier for a group of people to get behind.

Melancholies are detail-oriented thinkers and planners. They are best utilized in research and being involved in critical decision-making. Their methodical and detailed approach allows them to spend time to get the right information for a project or make a decision. They also have great organizational skills that allow them to keep themselves and others on task and focused on the current project. Their ability to question new ideas allows for those ideas to be refined into something more practical and useful.

Project managers should take the time to understand this because it will create a better environment for the group if you understand their strengths and where they struggle. The four temperaments cover most of the personality traits but the concept of introverts and extroverts deserves a more thorough study.

Extroverts and Introverts are the most commonly used words when people talk about traits within a personality. But what does it mean to be labeled as one? Is one better than the other? And how does this factor into project management? These are important questions to answer for a project manager because it gives an insider's look at how employees interact with their environment.

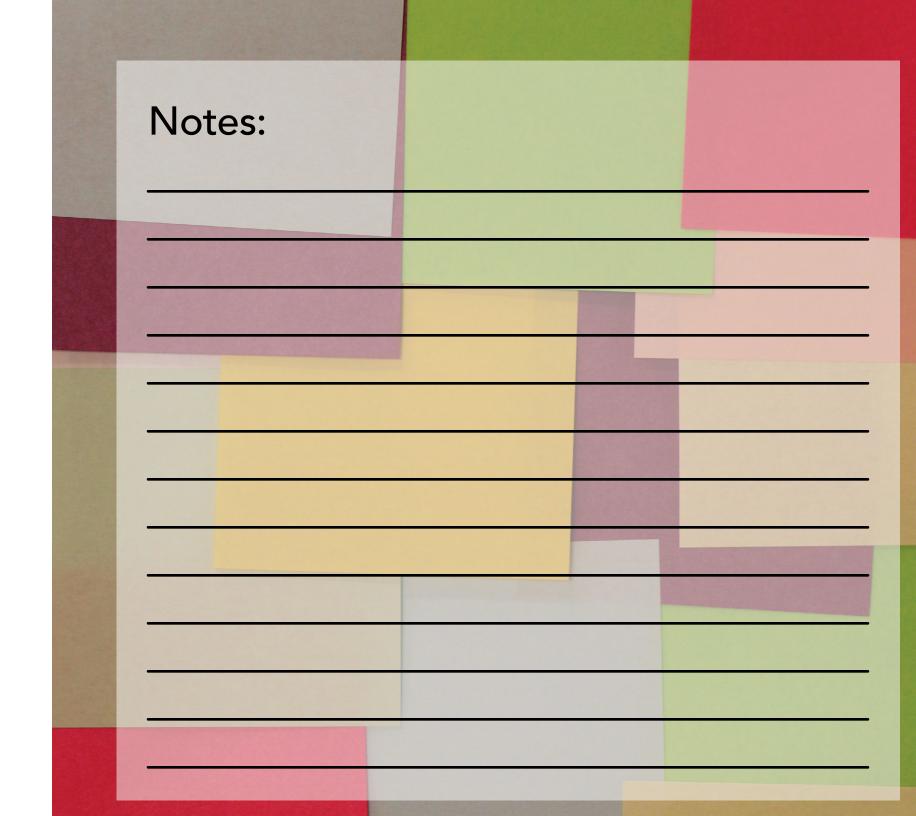
Introverts are individuals who have an inward focus on their lives, meaning that they get their energy and inspiration from within themselves. Many people have the misconception that to be labeled as an introvert is negative when in fact that's not the case. You'll see countless articles on the web that tell people being an introvert is not ideal and that you should try to act more like an extrovert. Luckily this is not the case, but instead the best way to think about being an introvert is that it's a way an individual interacts with their environment. Introverts tend to be more analytical, listening and observing an environment before they talk or interact. Introverts come with their own set of skills that make them unique and an asset to any project.

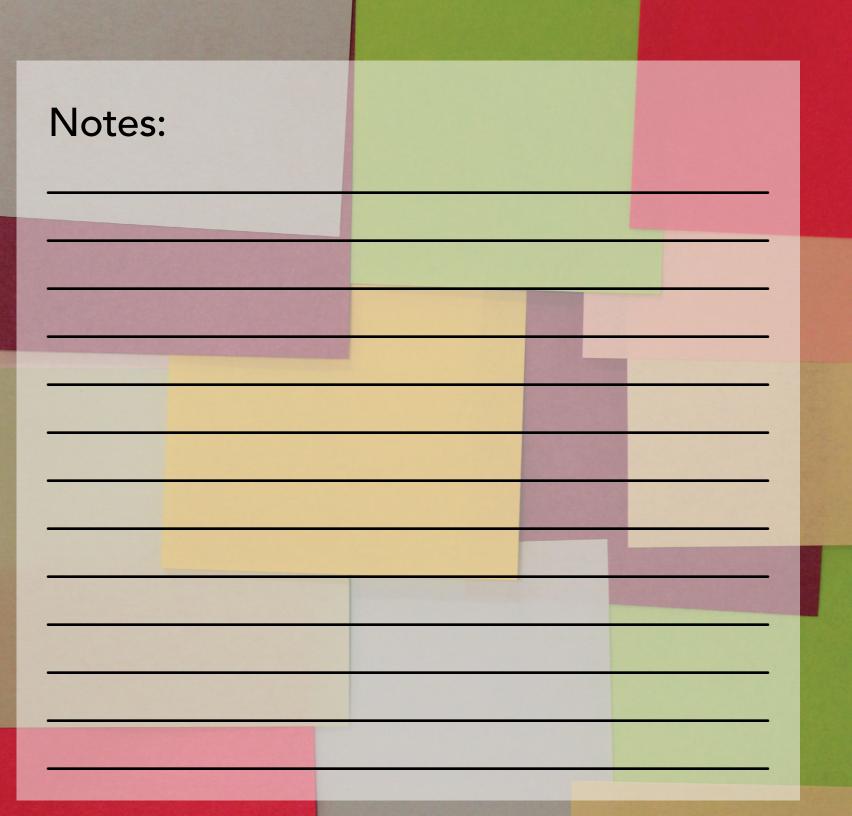
Extroverts are individuals who focus outwardly on their life, meaning that they gain energy from their environment. In comparison to introverts, many people define being an extrovert as a positive trait because they are more social by nature and that is a desired trait for many; but again the best way to think about extroverts is how they interact with their environment. Extroverts tend to jump in and get involved, they are quick to offer an opinion and want to make everyone feel included. Extroverts will bring their own unique set of skills and energy to a project that makes them valuable members.

It should be clarified that many people are not strictly an introvert or extrovert. This is a common misconception but the reality is that many people are a combination of the two. I can attest to this; most people would consider me to be an extrovert because I enjoy being social and easily talk to people with whom I have just become acquainted. On the flip side, I like having silence and a few moments to think about what is going on in life without the interruption of others. This too has its own set of

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advantages in a project team, the most predominant being it allows for high levels of flexibility. With overlapping skills at hand, individuals can be utilized in a variety of ways and enjoyment is easily found in most tasks given. Project managers can benefit from introverts, extroverts and combinations being present on their team.





Leadership Styles

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Chapter 9
Leadership Styles

Leadership is an important area to focus on when talking about project management. The role of a project manager does not only mean leading the project, but also to lead the people as well. Therefore it is important to address a few key areas of leadership that will have a large impact on how successful a project manager can be. The first area that we are going to look at is leadership decision-making styles. There are four that we will be covering: delegative, facilitative, consultative, and autocratic. Each of these four styles takes a different approach in how a leader can make a decision within a team. There are benefits and downsides to each style as well as times when a leader will have to use different styles depending on the situation.

Each one of the four styles plays a role within a project team. Many leaders don't consider how making decisions has an impact not only for them but for their team

members as well. Let's say that you have been assigned to lead a new project team. You're excited to begin work on this new project and quickly introduce yourself to your team members. Throughout the meet and greet with your team, you were repeatedly asked the question, "Which decision style do you use?" What answer do you have for them? Do you like to have a high amount of control or would you rather give most of the control to your team members? Do you strictly adhere to one style or do you find that a combination of the styles work best? Having an understanding of the four decision-making styles will help a project manager interact with their team members.

The *delegative* style is centered on the concept of autonomy. A leader who is practicing this style of leadership wants to empower their employees to make their own decisions within a certain set of parameters. Delegative leaders believe that it is to the benefit of the team to have the ability to call the shots themselves. This allows them to assume responsibility for the work they are doing and can increase the level of work performance. Delegative leaders focus on enabling their team members to perform tasks on their own, providing the resources they need but allowing them to determine how to reach the final objective. This is a great style for team members who wish to experience more freedom in their work environment.

The facilitative style is centered on the concept of consensus. A leader using this style wants to get buy-in from the whole group as to how a decision is made and how the group moves forward. A facilitative leader believes that it is important for the group to reach an understanding that everyone can agree upon. They do this by listening to the ideas of the team members and giving each one equal weight and full consideration before a decision is made. A facilitative

leader will be less likely to make a decision on their own but instead wishes for the group to decide on the actions that should be taken. This style of leadership works well with team members who like to feel that their voice is heard.

The *consultative* style is centered on the concept of recommendation. A leader who uses this style of leadership want to present an idea or problem to their employees, then get their recommendations on how to solve the problem before eventually making the final call. The end result of this process is that the leader is still the one making the decision.

The *autocratic* style is centered on the concept of control. Leaders who practice this style of leadership make decisions without the input from their team members; often they make decisions without consulting their team and basing those decisions solely off of the information they have in front of them. Outside of the work that is performed by team members, autocratic leaders keep most the information to themselves. They rely on their expertise in their field as the basis for many of the decisions that they make. Autocratic leaders think that this decision style increases the speed at which decisions and forward progress can be made; this is because the decision is only brought to one person and they can usually make a decision within a short period of time.

Each style of leadership has its strengths and weakness and those should be addressed when comparing the different styles. It should be stated that there is not one style that is inherently better than another – it is how the leader uses the style that matters.

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The Delegative-style strengths lie in allowing for high amounts of autonomy for the team members. Many team members like this approach because they are allowed to determine how their task is completed. The weakness of this style is found when team members aren't naturally self-motivated or don't wish to assume responsibility. Team members that prefer to work this way will be in conflict with how the delegative style functions.

The facilitative-style strength is found in the idea that decisions are made by consensus. This style allows for team members to feel that their voice is heard, and that they are a valued and important part of the whole. The weakness of this style is that getting everyone involved takes time. There are decisions that a project leader will have to make that need to be done on short notice and he won't have time to consult other team members.

The consultative-style strengths show that when a decision is being made, the people who are affected are usually included in the decision making process. This allows for more buy-in from team members as well as a greater knowledge base for making decisions. This style shares a similar weakness to facilitative, in that it can take longer to make a decision when trying to hear the opinions and suggestions of team members. In addition, if the leader has an idea of the choice they want to make but go through the motions anyways, the consultative style will likely have a negative impact on employees.

Lastly the autocratic-style strength is founded on how quickly decisions can be made. With this style the leader is solely responsible for making most

if not all the decisions for the project. The downside to this style is that team members start to experience some disengagement behaviors when they don't feel like their opinion is valued. An additional weakness is that decisions could be made on poor or inaccurate information that the leader has obtained.

With an understanding of the strengths and weaknesses of each of the styles we can now proceed with how to apply each of these styles to project management. Each of the four styles has its own merit and place for use. How to know which one to use revolves around three important questions: How much time is there to make the decision? How important is this decision to the project? How complex is the decision? If time is short then the autocratic style or consultative style could be used. If the decision has a high importance to the project then facilitative or consultative should be used to get team buy-in or consensus. If it is of low importance to the project then delegative and autocratic could be used. The complexity of the decision is a situational question. Some team leaders think the more complex a problem the more they should involve their team, while others insist that the greater the complexity of the decision the less they should involve their team. Each individual project leader is responsible in how to proceed with this question.

Types of Power used in Leadership

A project manager has many resources at their disposal to influence team members. There are three types of powers in particular that can be attributed to the position that the project manager holds. These three are: legitimate, reward and coercive. There are also two types of power that come from the abilities of a project manager and the relationship a project manager has with their team. The two types

"Legitmate

power has

limitations"

of personal power are expert and referent power. Each of these five types play an important role for the project manager and should be taken into consideration.

Scenario: You have been placed in the project manager role for a new project at your company. After meeting the team and laying down the groundwork for the new project you begin your work. A few months roll by and you come to the realization that things are not progressing as you would like them to. You then ask yourself the question: "How can I induce my team members to perform?" You are the leader and know that you have access to some powers. The question then becomes which one do you use? Is your legitimate power enough to influence them? Or will you have to reward and coerce? Understanding the different types will be beneficial to a project manager.

Legitimate power comes from the position that an individual holds within a team. A project manager will almost always have some amount

of legitimate power. This power is used to influence team members to complete a task at a specific time or in a specific way. Legitimate power has limitations to its effectiveness; it is only effective within the constraints of the project that a team member is a part of. If a leader asks team members to do a task outside the constraints of the project they may think that the project manager doesn't have any authority over them. To use legitimate

power effectively a project manager will have to be aware of the limitations and maintain respectful relationships with team members.

Rewards and coercion can be seen as subsections of legitimate power. Reward power refers to the degree in which a project manager can influence team members by using resources and rewards. A few examples of this would be task assignment, positive evaluations, and bonuses. Reward power tends to be effective because many employees like to be rewarded for their efforts. Coercive power refers to the degree in which a project manager can punish team members for not performing. Some examples include the right to terminate, demote or lower payment. A project manager would use this power on the principle of fear; using the knowledge that they have the ability to punish team members for not performing. This power is effective but only in the short term. Prolonged use of this power will have a negative impact on the overall legitimate power a project manager has and will degrade the relationships between them and their team members.

Each of these three types of power are handed to a project manager from the company they are working for; these have more to do with the organization they are a part of rather than the person themselves. It is important to make this distinction between organizational powers and personal powers: organizational powers are only obtained through position and are limited to the organization; personal power on the other hand are unique aspects to the individual and will play a significant role for a project manager in influencing team members.

The first type of personal power is expert power. *Expert* power comes from the skill or expertise an individual has that a team is dependent upon. If a project manager has a record of high performance, solving problems or having specific knowledge that is important to the project then they start to develop expert power. This is due

to the fact that team members rely on ability and knowledge of the project manager to complete tasks. Expertise is a useful tool when influencing team members.

The second type of personal power is referent power. *Referent* power comes from the perception that team members have of the project manager. A project manager that has a high amount of referent power tends to have a good reputation, an adequate level of charisma and pleasant personal traits. Referent power is considered to be one of the most influential forms of power in a group because team members aspire to be more like their project manager. The challenge is that referent power isn't just acquired; it is earned and developed over time. There are individuals who have something about them that causes people to have an instant sense of referent power but this isn't often the case. If a project manager wants to have referent power they should evaluate who they are and look at what they can change in themselves to become someone who people naturally respect.

It is possible for a project manager to have every type of power at their disposal; but realize that each one has a time and place when it should be used to influence team members. Legitimate power is fairly common place and doesn't have many restrictions on when and how it should be used; a project manager exercising their influence should keep in mind what they are asking of team members and make sure it remains within the constraints of the project they are working on. Reward power is a useful tool and is helpful in motivating employees to complete a task; just be careful with how often you use this power. Some team members aren't motivated by rewards and others might start to expect rewards for just performing their job like they are supposed to. Coercive power is a power

that should be used sparingly; there are instances where threat of punishment is the only way to motivate certain team members but it should not be used long term. The longer a project manager uses this power to influence team members the less respect and compliance they will have towards the project manager. Expert and referent power are tied to the individual and tend to be more about a project managers actions than their orders. These two powers can be used freely and almost without consequence as long as your behavior supports them. If a project manager consistently makes mistakes or acts in a way that loses respect of their team members their ability to use their expert and referent power is quickly diminished.

Team Composition

Project management is a diverse field that requires a lot from the project manager, who can often be seen juggling many tasks to keep a project moving forward. This is where the idea of team composition becomes important. Wouldn't it be great as a project manager, if you could rely on team members to help accomplish critical tasks, keep the project on schedule, and help create a positive work environment? These are some of the concepts behind team composition. A successful project manager will take time to build up a team, and that can help them complete their project more efficiently. Not every project will allow a project manager to build their own team; they will have to work with who is assigned to them. A project manager should build a team based around team member's personalities. Also depending on the size and industry of the project; they should consider leadership capabilities of team members and the appropriate style to use for that industry.

Take a moment to think of a project that you worked on in the past, whether it is in a school or work environment. Think about the industry and the people that you worked with. How did that contribute to the team composition? Was there an even disbursement of personalities or was there a high concentration of one type? Was the leadership style efficient and effective? You have probably come to the realization that some of the best teams that you have worked on had a good mix of personalities and the leadership style matched the project you were working on. A project manager should have a good understand of what makes up a good team composition and what leadership style should be used for that composition.

When it comes to team composition the first area that a project manager should understand is the personalities of their team members. As discussed in the last chapter, there are four main types that need to be considered:

Choleric, Sanguine, Phlegmatic, and Melancholy. We discussed the benefits and downsides of these four personality types but now we'll address the importance of getting a balance of these personalities on a project team. Many project managers will look at the benefits of a single personality and think to themselves that they'd like to have a full team of those people, but that could cause complications. Think for a second if you had a full team of sanguines, you'd probably have some of the most talkative and interactive meetings of your life but when you left that meeting not much work would be accomplished after that. Or think if you had a team comprised of exclusively melancholies. They'd provide an ordered and focused environment but at any complication in the project they would become discouraged and unmotivated to move forward. This is where the importance of

having a good mix of personalities comes into play. Your melancholies are balanced by the sanguines and your cholerics are balanced by your phlegmatics. This allows projects to be efficient because team members are intertwined with each other and provide support for each other in areas of weakness. In addition to this a project manager should understand how to use leadership styles effectively.

Leadership is an important aspect in team composition because it has impact on how well the team works together. Two aspects can determine a leadership style that should be used: the industry the project is in, and the size of the project. The industry would have an impact on what style a project manager should use. In construction and engineering projects, a project manager would likely want to implement a more autocratic or consultative style because decisions must be made in accordance to codes and regulations that have to be followed. In marketing and the healthcare fields a project manager would likely want to implement the facilitative and delegative styles; this is because team members are allowed to have more autonomy and don't need as much direction when completing their tasks.

It is critical as a project manager to know which style is going to be most effective in the industry in which you are working. If a project manager tried to use a delegative style in construction, most of your buildings wouldn't meet the requirements. In the same manner if a project manager tried to use an autocratic style of leadership in healthcare it would waste more time than could be spared making every decision. The industry is an import thing to consider but not the only aspect; there is also the size of the project. With a small project team, the style that is best utilized by the leader is important but not critical. Once you increase the size

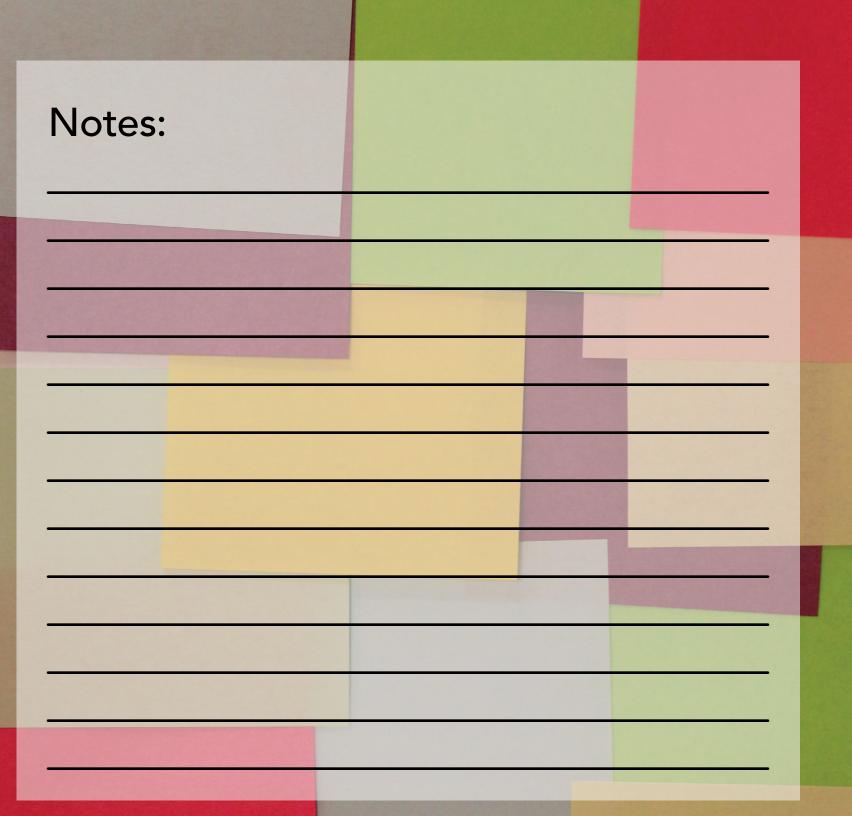
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of the project team and you start to have additional leaders on the project, making sure the different styles mesh together is vital to consider. When a project manager has different departments reporting to them, making sure you understand their leadership style and some of the potential conflicts that could arise between them will help you figure out how to best prepare for and deal with these situations.

You are in charge of a large project with multiple departments under you; these departments have to communicate with one another effectively for the project to run smoothly. After the first month of the project you receive report after report from different departments complaining about communication struggles. Your product design leader is very autocratic and likes to make all the decisions, while the marketing department leader takes a delegative approach – allowing team members to take their own approach to getting the work done. Marketing is upset because their progress is slowed due to the bottleneck operation presented by the product design leader. Every decision has to be made by the design leader instead of members of the team that could very well answer the questions. How would you go about solving this issue? Would you force the product design leader to be more facilitative? Or would you coerce marketing to make more of the decisions within their own department? This is why a project manager should think carefully about the leadership styles of those who report to them. If this had been taken care of in advance you could have come to an agreement between the different departments to encourage the different styles to work together. You could appoint individuals from each department to be the main correspondents between each department and allow them to sort out the decisions they could answer or should answer themselves and what they should pass along to the different department leaders.

Team composition is an important aspect for project managers to get an understanding because haphazardly choosing a team could lead to a failed project before you even get start. Knowing how personalities interact and how to use different leadership styles will help increase the odds that your project is successful. A project manager should never underestimate the importance of those who work with them and the role they play. Instead they should capitalize on the knowledge and use it to create an efficient and effective work environment. With an understanding of this, a project manager can turn a good project into a great project.



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Chapter 10

Business

Delta, General Electric, Raytheon, Boeing, are just four of many multi-national corporations that all have something in common: they need project managers to help implement and move the company's goals forward. Unless you are a small-scale company there isn't really a practical way you can change the direction of your business in order to stay competitive without proper project management.

Having good project managers in your organization could make the difference between remaining competitive or losing out to your competition. Often times implementing the right projects within your organization will be the difference between success and failure. One company that truly understands the importance of project management is Hewlett-Packard (HP). Ranked in the top 20 of the Fortune 500 listing the last 10 years. "'Along with our strong interaction with customers and business partners, using integrated program and project management processes and systems is essential to the way HP excels,' says James E. Crotty, PMP (project manager professional), Hewlett Packard, Enterprise Business, Account Program Management Office Services for HP. 'It's what keeps us at the forefront of the IT services industry.' "

HP has developed 5 key objectives to help in project management development of their employees:

- 1. "Develop employees' business and project management skills to support the successful pursuit and delivery of client engagements.
- 2. Provide for the professional development and career growth of the project management community.
- 3. Align with the generally accepted good practices identified in A Guide to the Project Management Body of Knowledge (PMBOK® Guide), the most widely recognized global standard for the practice of project management.
- 4. Prepare project managers for the Project Management Professional (PMP) ® credential examination.
- 5. Provide a consistent worldwide program."

Many large companies hire consultants at great expense to help them become more competitive. Essentially the companies are hiring them to do a project that they themselves could do if they just hired the right internal project manager that could keep on top of various projects at a time rather than just one. Some companies are starting to figure this out and utilize project managers, while others that depend on consultants to move forward will end up losing out.

Small Business

Successful small business owners – knowingly or unknowingly – make great project managers. If they weren't their business would not be successful; typically they work in stages or steps by implementing projects. For example: Project #1: Create a business plan outlining every detail of what your business is and how it will achieve success. This will include a mission statement, what the business is, a marketing plan, financial analysis, etc. Project #2: Implementation of your plan which would include secure financing, hiring employees, obtaining licensing, office space, furniture, beginning the cash flow, etc. Project #3: Working toward breakeven, then growing the company to become profitable by working with customers, vendors, suppliers, sales people, etc. You get the picture, running a small business is just a series of projects that you have to manage well.

Management and Human Resources

The fastest way to move up the ladder in management is to accomplish something that makes you stand out from the rest of your peers. If you can successfully manage a project that accomplishes a company goal, upper management will quickly recognize

"successfully manage a project"

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you as someone who gets things done. Promotions are often times given to those who can produce, and someone with project management skills will achieve this. There are many different projects you can do to differentiate yourself from other and to really build up your resume; just keep a willing eye out for such opportunities.

One of the more successful projects that I've personally worked on was a Human Resources Management Project for a local community center, SonBridge. They had a need for a human resource policy and procedure manual for volunteers and we immediately divided the labor based on the strengths of each person in our group.

SonBridge had a total of four paid employees and over 150 volunteers, but no HR policies or department to manage all of their volunteers. The four people on my team were tasked with creating the proper documents to have a fully functional HR department. The end product was the creation of volunteer evaluation forms, an entrance and exit interview process, and a company policy and procedure manual complete with job descriptions. The project was so successful that our work was shared with other entities outside SonBridge that were lacking proper human resources manuals and materials.

Marketing

In order to be successful when it comes to marketing, project management is indispensable. Marketing is simply a series of projects. A good marketing campaign won't only hit a single medium. Think of your favorite advertisement you've seen or maybe the most memorable one. For me it would be an Axe advertisement released in March of 2013.

The ad was released for March Madness and had two basketball teams facing off. One team is trailing by two points and has the ball in the closing seconds of the game. The ball is inbounded and passed to a player. He makes the 3-pointer as the game clock expires. The announcer is narrating the entire time and as the player makes the shot, the announcer says, "Oh hold the phone, there is an astronaut on the court! You've got to be kidding me! What a moment! An Astronaut! It just does not get any better than this!"

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As this is being said the camera pans over so you can see the astronaut. The cheerleaders run over to the astronaut and as they reach him, the words "Nothing beats an astronaut" come up on the screen. The camera quickly pans over to the player who made the shot and you can see him alone walking away looking slightly frustrated, then the word "ever" comes on the screen.

This commercial is one of several in the Axe Apollo series, and in my opinion is nothing short of genius. However, to make such a commercial requires a series of successful projects coming together. When someone comes up with an idea for an advertisement like the Axe Apollo ad campaign, someone will need to do a storyboard for it, script it, and hire actors. This might be project #1. Depending on whether this is for television or the Internet or both an advertisement will need to be filmed; project #2. Distribution of the ad, when in the year will it be released, what medium will be used, what time will the advertisement air is another separate project; project #3...and so on.

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The marketing team will also be in charge of the placement of the product and where the product is sold. Design is a huge part of the marketing process and what the product will look like and how it will be packaged. Just preparing a product for promotion is a huge project with many sub-projects off of it. Market research is also a major project trying to determine if the name is catchy, the price of the product is appropriate, the name and image go together, etc.

Accounting and Finance

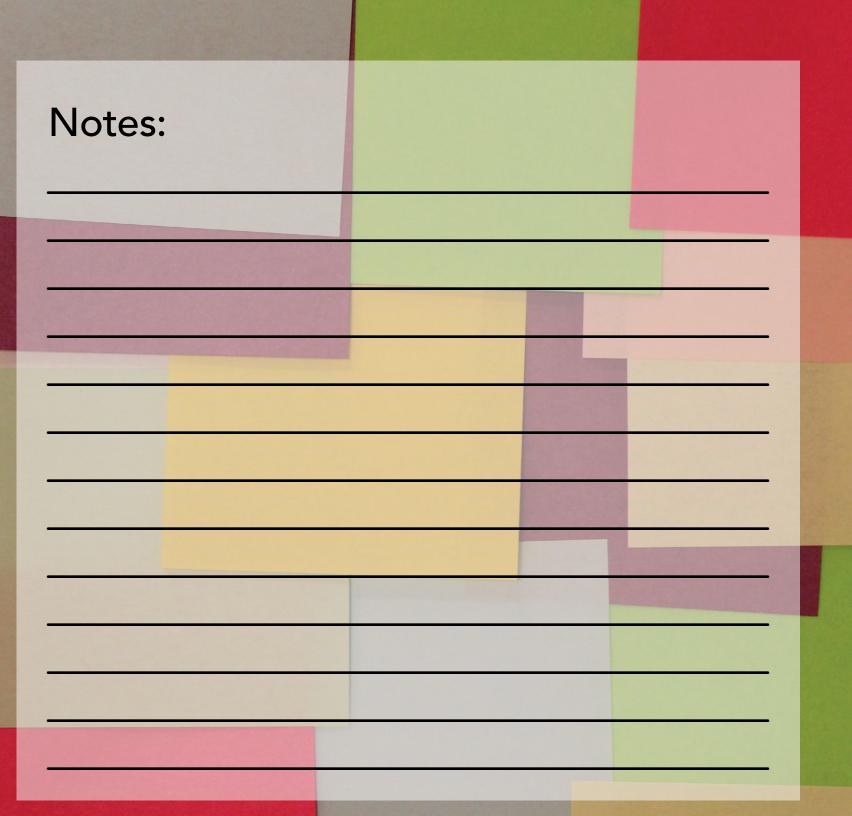
In every sector of our economy and for any organization operating today, accounting and finance are at the center. This is why almost all organizations of a certain size will have a Chief Financial Officer.

This person will be involved in a number of projects every year. Particularly at year's end when reports are due. For government workers the budget year often ends June 30. You will also have audits every so often and if you have not been competent in your financial reporting then fines and reprimands will follow.

For every project that someone works on there is very often a financial component attached. Typically the person keeping track of the money on that project will be an accountant or someone with a financial background. So is project management important to the numbers people? Absolutely! For every project that is run through an organization someone has to not only understand the project but how to account for its income and expenses.

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One of the most essential parts of project management is being able to stay within your given budget. The accounting and financing departments typically will help with this. Keeping on budget is important and if your project it too far over the success or continuation of your project could be in jeopardy.





Government and Non-Profits

As americans, we love a good cause. If there is a child in Africa that needs our help getting through school and we can help them for as little as a monthly payment equivalent to the cost of our favorite iced triple grandé caramel macchiato with extra whip, then we're game. Non-profit organizations are everywhere. They include all kinds of businesses from National Public Radio: "creating a more informed public"; to Charity: Water, "bringing clean and safe drinking water to every person in the world." These organizations eat, sleep, and breathe projects. Projects are the leading forces for their organizations achieving success.

Defined

What defines a non-profit organization other than the apparent fact that they exist to serve a specific purpose besides making a profit? These organizations greatly depend on donations and grants; a lot of the work done is accomplished with the help of volunteers, and they are highly sensitive to economic downturns. Project Management in a non-profit environment can look different then in a for-profit environment. There are various factors to consider, and the organization as a whole is set up differently than a corporation.

The non-profit organization is an interesting entity, as it is often still a "business" from a functionality standpoint but it exists for a distinctly different philosophical purpose. Some non-profit organizations struggle because they run with too much of a business focus, and subsequently they forget that they have a "higher" calling than just making budget. Other non-profits have difficulties because they are so focused on their mission and vision that they forget to perform necessary organizational steps, which include issues of personnel, funding, logistics, and management.

—Todd Pheifer

Non-profit organizations face a challenge that many larger corporations don't – a lack of manpower. In larger corporations specific roles are easily delegated to specific individuals. While in non-profit organizations it is very likely that each individual will be tasked with multiple responsibilities. When this is the case, effective project management skills become essential.

The Process

While many things are different in the world of non-profits, the fundamentals of project management still exist. You need to identify various factors of your

project including the budget, scope, schedule, etc. First of all, you need to establish the basics. Start by asking yourself: Who should manage it, and who is likely to manage it? Often these two questions are not the same; if you're going to choose a manager, this person needs to understand the principles of

"take

advantage

of their

skills"

project management and be willing to apply them. Are they

resources, etc., which is discussed in chapter [?][s1].

committed to it? Do they have the time for it? After you are satisfied with your answers to those questions, you can move on to establish the scope, budget, schedule,

As previously mentioned, volunteers contribute much to projects in the non-profit world and are heavily relied upon. Attracting volunteers to further your cause is one thing; organizing them is entirely different.

Volunteers have certain needs that you should be careful not to neglect; they want to know that their contribution to your project is valuable. They need to clearly understand the project goal and their role in making that goal a reality. Each volunteer also needs to possess the skills you are looking for and have their schedules respected. Just because someone is willing to help doesn't mean that they have the time to help at the drop of a hat. They have their own lives outside of volunteering and you need to be sure to respect that by giving plenty of notice before requesting their help on a project. Be sure to give them specific instructions; remember they do not have the same knowledge about the project as you do. Take advantage of their skills; don't demote them to "grunt work" unless they want it. Be sure to not overwork your volunteers, if you do you run the risk of them burning

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out and not feeling respected. Motivate them on a regular basis, encourage their efforts, and remember to thank them frequently. If you build good relationships with your volunteers they can be your best assets in completing a project.

Sonship – Serving Overseas Nations by Ship

Helen Oliver was born and raised in the Solomon Islands to Australian missionary parents. When she came of age, she was sent back to Australia to get a college education. She met Trevor Oliver, fell in love and got married. She still had a desire to go back and work in the Solomon Islands; Trevor agreed with her, though he wanted to make their work a self-sustaining business. In 1989 they started a shipping business that helped the locals in the islands transfer goods from remote locations to the point-of-sale.

By 2004 the company had grown to include a tenured piece of property with a house on the islands with a live-in manager, also where the workers could stay; a few years later, they were able to purchase a second boat. The concept for Sonship evolved late in 2003 and was initiated in April of 2004 when a group of 23 volunteers left Australia and flew to Kukundu in the Solomon Islands. In April 2007 an earthquake and tsunami hit many of the western islands, including Kukundu. As a result of this natural disaster the Sonship team began noting how vulnerable and isolated the villages on the islands really were. It took weeks for air support to reach them, and even then there was next to no medical help. This was when the Oliver's and their volunteers began to transition into a disaster relief program.

In August 2007 they purchased a 50-foot power catamaran with the goal of transforming this boat into a permanent floating medical clinic that is able to travel to the remote islands easily. Today the Sonship program travels to remote locations providing them with much-needed medical help.

In the mid-2000s, a group of Americans came in to the project, and saw the potential to help the islanders become self-sustaining through natural means: coconuts. Also known as copra, coconuts are extremely bountiful in the island jungles. The Oliver's and the Americans needed funding, and eventually were able to secure funds to purchase an oil mill that would eventually be run and operated by the locals.

Natural biodiesel can be produced from coconuts, which is roughly 62% of the coconut by weight of the oil. Fuel is made through the process of gathering coconuts, run through cutters to shred the nut, and squeezing through the mill to retain the oil. The islanders now run the mill and all aspects of gathering, producing, and selling to those with land-based generators as well as dieselfueled boats. An interesting side note is that the same oil used in diesel boats could be made into the food without any difference in preparation.

Government

For most Government operations here in the United States – it's just in their nature to grow bigger. You'll be the one to initiate a program, but whoever is leading those programs will always want to expand it, make it bigger, have more resources, have more money, hire more employees; because that's part of their job. ... It is structured so that the project will continuously get bigger; and that's

not necessarily either a bad thing or a good thing. Usually the way governments expand is they need to have a budget that's been approved for the next couple of years. They are required to have a scope of what the project is trying to accomplish. Now if the government wants to get bigger they are going to have to use existing resources and money to do some kind of project on the side. That's where project management comes in; if your project is successful and your superiors like what you're doing, then you apply for what's called an RFP - a Request for Funding Proposal. If your RFP is approved, then you will get the go ahead for a small budget to do that project again. The next year you're going to ask for more money, etc. The US Government is continually working on projects, whether it is passing a new law that will affect the entire United States, or a state employee researching the next location to build a state park. With all of its ongoing responsibilities and the continual introduction of new projects, the government needs many employees to keep progress moving in a forward motion. The US Government employs over 8,600,000 workers every year - this number includes the executive branch civilians, uniformed military personnel and the legislative and judicial branch personnel.

A Quick Look

With just a Google search you can easily see what projects the government is working on at the moment as well as how many they have completed. Illustrated below is a map of Washington State with the Department of Transportation's completed and ongoing projects. The active projects are indicated with an orange pin and the completed projects are indicated with a green pin. As you can see it takes a lot of people to help make these projects become a reality; it is essential to have the skills to understand just how a project and team works together, moves, and grows.

I could easily show you map after map or list after list of what different government entities are doing all over the county but that would not entirely benefit you, the reader, on how governments use projects. Instead I am going to start by telling you a story about how starting a project can easily grow larger or become its own program.

Grant Applications

Applying for a grant. That in itself doesn't sound too involved does it? You

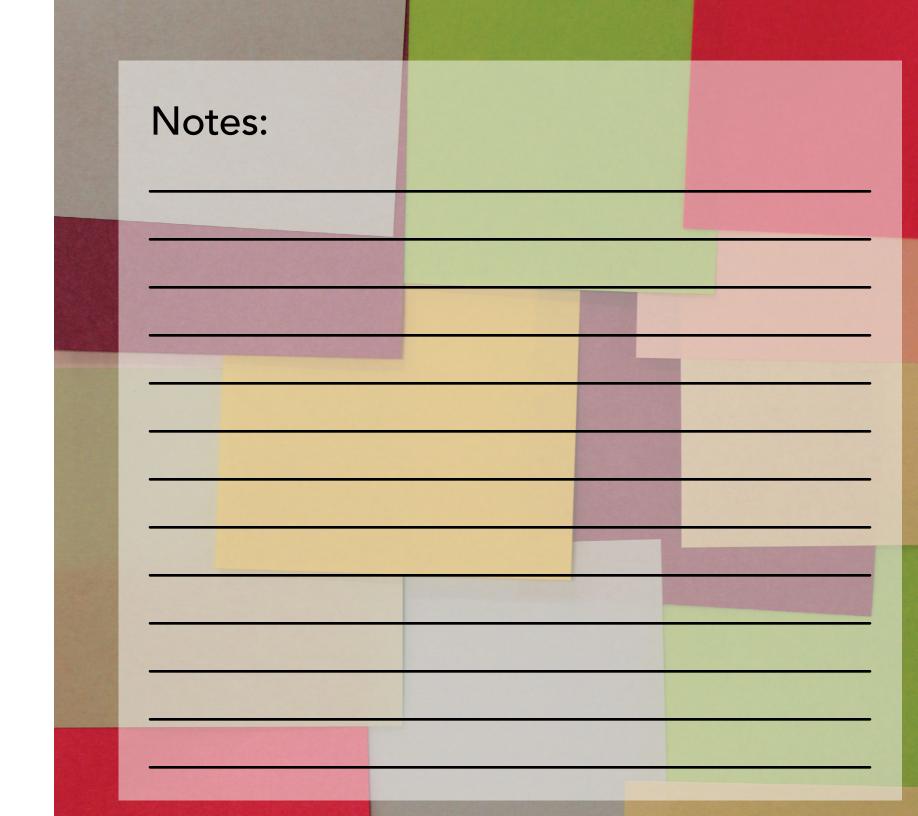


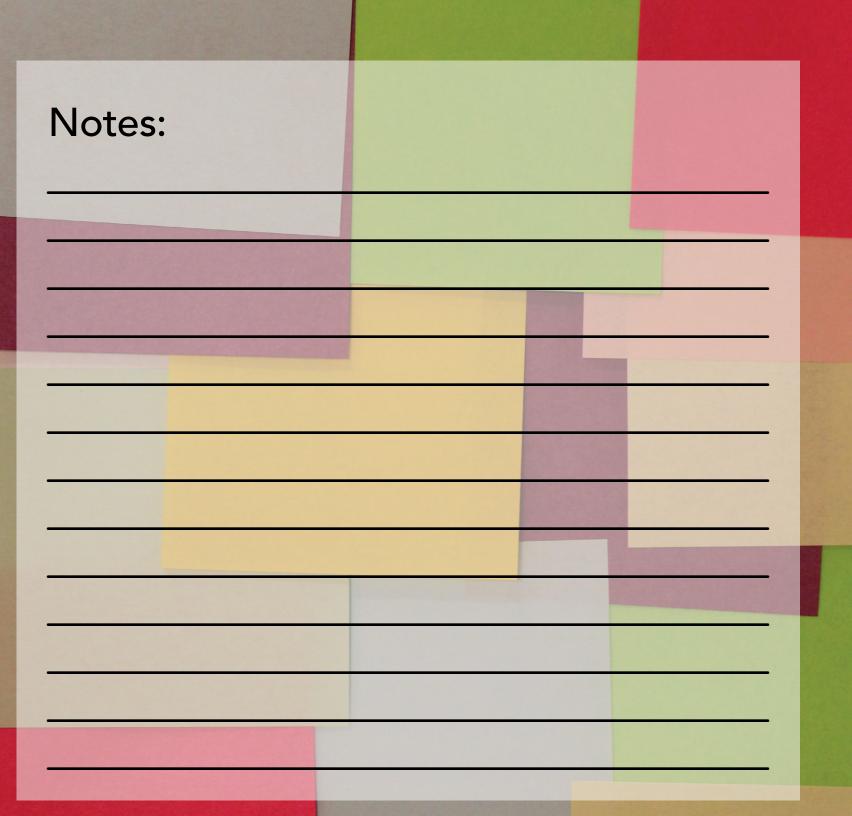
have most likely already applied for jobs, schools, etc. Sure it takes a little bit of time but it's nothing you can't accomplish. Yes, those applications can seem complicated at the time, but compared to applying for grants they can seem as simple as adding two and two together. Applying for a grant can take a lot of time and frankly, can be quite exhausting. They require a great amount of detail about many different areas of your company, your proposed project, your financials, etc. As stated before, when you require additional funding for a project, applying for a grant can be a project in itself.

Managing all of the pieces needed for a grant application can be tricky. If your application doesn't meet the grant administrator's specific instructions, your application most likely will be given no more than a glance before it is tossed out. If the grant requires that you compile all of your information in a spiral bound

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notebook; that is what you must do. As petty as it may seem, the people who are potentially giving you a grant have several applications to look over before they make their decision and they want them to meet their specifications.







Chapter 12

Education

Projects and project management were typically associated with engineering or construction but have since branched out into the field of education. In fact, using real world projects in the classroom has been a trend that has continued to gain momentum from kindergarten classrooms to university level classes. There are countless articles on the positive effects of incorporating real world projects in the classroom and learning.

We can all remember a memorable field trip we took as a child and can probably remember a lot of details about that trip, but it may be harder to remember any particular day in school when the teacher was simply reading the textbook or you were doing your math homework in class; don't get me wrong, it is important to do your homework but the really memorable events happened 150 Chapter 12 – Education Chapter 12 – Education 151

when you were involved in something that had you interacting and collaborating with others. When you are part of a project it comes alive for you because it is interactive and stimulating. Do you remember any school projects you did as a child that was then displayed for the parents to see; or a pinewood derby car you raced with other kids? Why were those events memorable? Because there was action involved that provided a tangible and interactive experience.

Children aren't the only ones that respond well working on projects; educators are also involved in many different projects, and are stimulated much in the same way children are. Everyone appreciates the teacher who is continually trying to make the learning experience and environment better for children. If

you google the Huffington Post and type "Technology in the Classroom," you will see dozens of article that talk about how technology is being used to aid student learning. Every time a school or classroom updates their technology, that is a project they are implementing; schools also do a great job working with parents to create fundraising projects that can be quite involved. Additions or expansion at any school is another project that involves the board, principle, teachers, districts, etc.

"technology in the classroom"

To make sure that any of these initiatives are carried out successfully you will need someone who is experienced in project management; working on a school project that is unorganized with no direction or project manager can easily turn into chaos. For those parents, teachers, principles and board members who

have project management experience, those same skills will become a huge asset to whatever educational institution they belong to or participate with.

Colleges and Universities

At the College and University level, using projects in the classroom is proving to be a popular trend and a very useful tool. In addition to textbook knowledge, doing real world projects give students experience with hands on learning and it is something they can put on their resume. The Walla Walla University School of Business incorporates real world projects into their business curriculum; over the past two years they have completed more than 25 different projects with their students. The kids work with community and business organizations helping them with Strategic Planning, Marketing, Management, creating business plans, advertising campaigns, etc.

Stanford University, UC Berkeley, Syracuse University, University of Virginia, and Walla Walla University – to name a few – all see the value in projects and offer Certificates in Project Management. Stanford has been perfecting their program since 1999 and they have educated over 5,000 students in project, program, or portfolio management and the interest in management education doesn't seem to be slowing down.

Implementing projects in the classroom

An interview with one Professor who wishes to remain anonymous provided his perspective on using projects in education: "If I could not use projects in my classroom I do not believe I would continue teaching. Lecturing really is rather

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boring, but if you combine a project with the textbook, you are able to implement what you are learning; they complement one another well. I'll give you an example:

Strategic Management can be a really dry, boring subject because you are just rehashing what students have learned from their previous business classes. However if you center the class around a project, the subject matter comes alive and starts to become real and tangible; students feel like they are accomplishing something rather than just learning concepts they feel they will never use again. All of the concepts they have learned in class will be used to create a project that benefits a local business or organization; and who doesn't feel good when they have helped or contributed to something important? My classes that implement projects typically get high student evaluation ratings. If I didn't have projects in my classes I doubt my evaluations would be as high; this also tells me that students appreciate projects as well.

In fact 60% of my students said specifically on my evaluations that the real world projects are what they enjoyed most about my class and it makes sense. Listening to lectures and reading a textbook is important, but the real excitement of learning is when you can apply it."

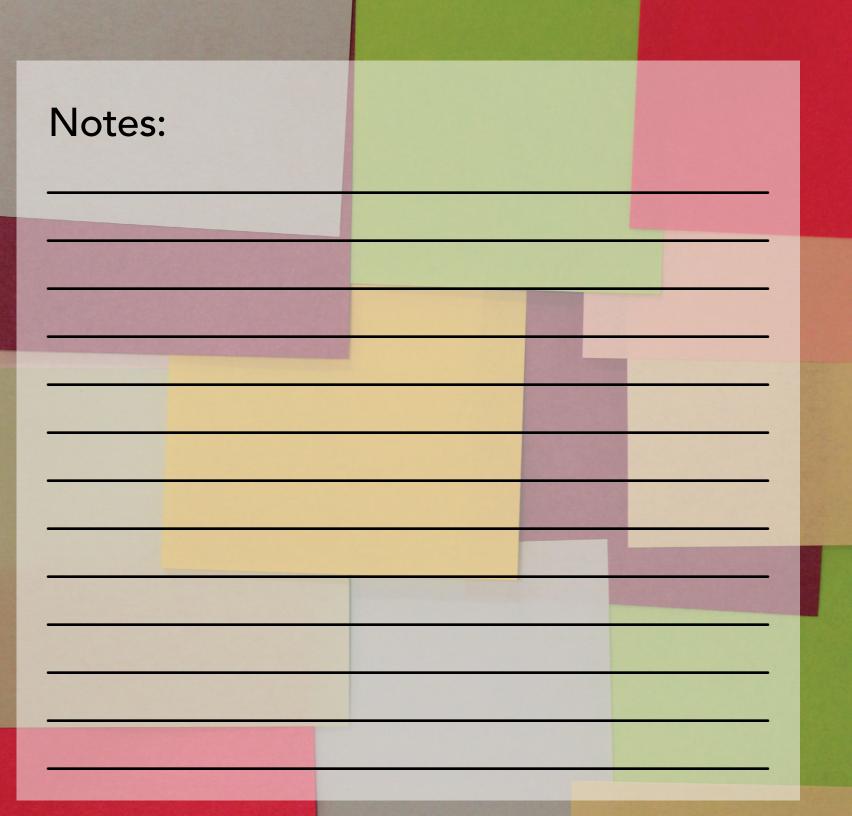
Here is another interview with a board member about their experience with school projects: "I have had the privilege of serving on elementary school boards, high school boards, and finance committees with different schools. Budgeting and fundraising are always two big topics at board meetings and when we are short of our budget, we start thinking about fundraising to make up the difference.

We have had book and magazine drives, selling food and baked goods, joga-thons, fun fairs, and other events that help raise money for our schools.

The fundraising drives that were the most successful usually had a champion or project leader that not only knew what they were doing but understood how to rally support from teachers, parents, and the community. Without someone leading the charge I have seen fundraising events flop; where everyone started complaining about how we should have done it this way or that way. If a teacher, principle, board member, or parent has experience and knowledge managing projects, I believe it is their duty to step up and manage the project; everything goes 10 times smoother when someone knows what they are doing. On the flip side if someone steps up to manage a project and doesn't know how to do it, then they should offer to help and not lead.

The same goes for any school project we are working on. I can remember when our school was raising money to build an addition; nobody was in charge of the project and it went in ten different directions. Everyone was waiting for someone else to do something, but at the same time everyone had an opinion about how things should be done. If someone would have stepped forward with project management experience it would have saved a lot of expense, headache, heartache, and bickering."

So as you can see, project management is extremely important in education and those who have that project experience or education will be a great benefit to their organization and community.





Chapter 13

Healthcare

The field of healthcare is changing. Why? Lets start with a big explanation: government. The reason that government is so involved in the way that healthcare is changing is every time the government makes a new rule or regulation healthcare has to comply. When the government insisted that all healthcare providers had to have electronic medical records by 2014 it was a big deal.

Entire clinics were buckling under the pressure; employees who were unable to cope with the idea of such big change were quitting their jobs, and the entire culture and flow of the current system was being turned upside down. Dozens of projects were involved in shifting to the EMR system. Here are just a few:

- 1. Finding EMR software system
- 2. Changing the system flow of tangible patient documents to a nebulous server, web-based document system.
- 3. Patient's paper files needed to be scanned and entered into a database.
- 4. Different hospitals, and departments within hospitals had to interface with other departments who didn't have the same database software
- 5. Upgrade of servers, web-based storage and other supporting equipment.
- 6. A programming team had to code an interface software to allow everyone to communicate.
- 7. Clerical staff had to be trained on how to use the new software and navigate the online patient database.

Now we've only mentioned seven challenges that resulted from the government's decision to require all hospitals to adopt the EMR system. There certainly are many more challenges, but we won't mention them for the sake of saving time.

Let this be known, however; each of the seven challenges mentioned required separate projects and project management techniques to accomplish them. None of this would have happened without skilled and experienced individuals who have what it takes when it comes to project management.

Healthcare doesn't just take on projects for change when the government makes them. It can be a competitive industry and changes in the business world

affect the way things get done. Consider the example of the "Toyota Way," or the "Toyota Principles," and how they are affecting the way healthcare operates all over the country. The Toyota Principles were developed to better the car-manufacturing company Toyota. You could break these 14 or so principles down to two: 1) continuous improvement and 2) respect for people. Ideas like setting a vision, and finding the source of the problem fall under 1, and incentive and empowerment ideas fall under 2.

These principles have worked for Toyota and healthcare companies like Virginia Mason have taken note and implemented them into their systems. Of course Virginia Mason is aware that patients are not cars, but realizes that the complex production systems that go into making a vehicle can be fine-tuned similarly to the processes of admitting a patient, having a clinic visit, or performing a surgery.

So, why are we talking so much about the Toyota Principles? Whenever you talk about implementing a whole new way of doing things it is implied that there will be multiple projects to bring it into place. For example, Virginia

"Patient

Mason implemented a PSA (Patient Safety Alert) system so that when staff encountered a situation that was likely to harm a patient they were required to stop, move the patient away from the harmful situation and write a report on what happened. An investigation of the

Safety Alert" a report on what happened. An investigation of the problem would ensue in order to resolve the problem.

Implementing this type of system takes work. You will need to retrain the staff, align the system to take on

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the new alerts and reports and coordinate all the other working parts of the system to align with it. Without a project manager and a team of people to make this happen, it simply wouldn't. From 2002-2009 they have seen a dramatic increase in patient safety- and a sharp drop in professional liability claims to go along.

A project was born to re-incentivize a business, to see as many patients as possible. On paper the solution/project was simple: pay physicians by the number of patients they see, give staff incentives for putting more patients through. But how would that play out in real life? Meetings were held and the project team asked the different parties what would motivate them. The front desk suggested that gift cards be awarded every day they met their patient quota. The project management for this Hospital recalls front-desk workers racking the phone lines just to get another patient to meet their quota.

Another project helped address the problem with insurance billing. Insurance companies aren't always known as generous when it comes to paying out for services performed. They were paying just a little more than what it cost to do the procedure and net income was suffering -majorly. The project manager wanted to see if they could pay more. By farming out the billing to an organization that works with hundreds of hospitals and insurance providers he was able to see if he was getting paid less than other hospitals near him for the same procedure. By asking the billing agency what others were getting paid he was able to have grounds for negotiation with insurance companies and put his billing and clerical staff to work -making sure they were paid an amount that would turn into profit. Cash flow went up 30% because of these endeavors. A successful project if there ever was one!

There are scores of other projects undertaken at this medical center that made it a success but we don't want you to read forever. It might be a nice day outside. So, go play. Review what you've learned, stick a bookmark in here and come back after you've gotten some exercise.

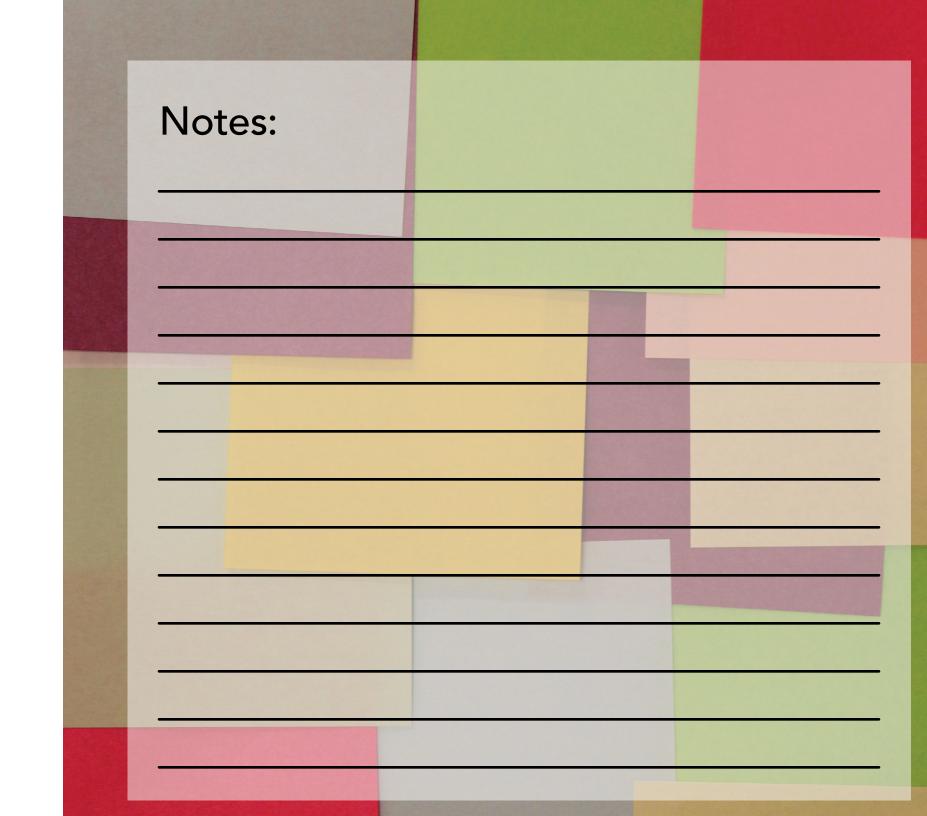
Now that you're back, let's talk about some project ideas that lots of hospitals and clinics are adopting. In healthcare it's important to specialize in a certain field to differentiate yourself from the competition. Just how you do that is where the project management comes in. Say, for instance, you would like to obtain Rural Health Clinic status and thus obtain funding from the government for each approved patient you see. Well, the obstacle would be the paperwork, filing, knowledge of how the government works and manpower to bring current clinic or hospital systems up to snuff so as to meet the requirements. About 5-10 subprojects are involved in this single project: obtaining Rural Health Clinic Status.

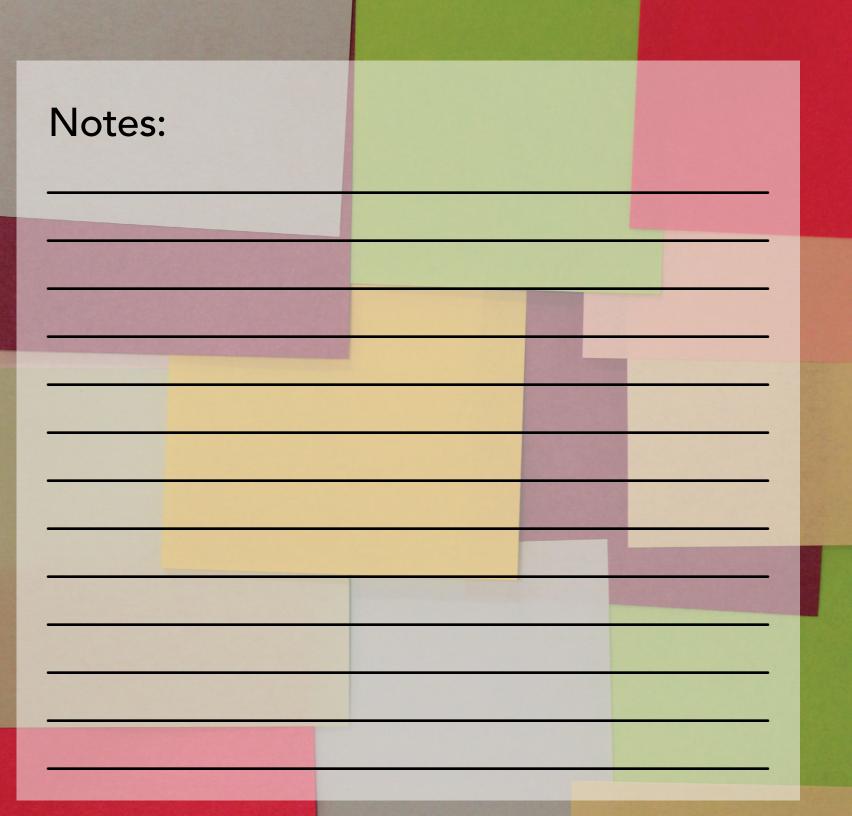
What about increasing word-of-mouth marketing for your clinic? Well, there are multiple projects that you could undertake to make this happen. The clinic made a point of offering free flu-shots, free physicals and other community-service oriented services to increase the good PR vibes and bring more people to the clinic through good references.

Maybe a hospital is having a problem with low morale and employee buy-in? Setting up projects that allow for a FLEX TIME system where employees can manage their own time off amongst each other to allow for 3 day weekends and whatnot might 160 Chapter 13 – Healthcare

be just the ticket, or maybe a project that beefs up Christmas parties and company events to bring the families and communities within the organization together.

Projects like these need to be done in order for healthcare institutions to stay afloat. Projects are the lifeblood of healthcare and make sure that continuous improvement and innovation are more than just ideas, but reality. Perhaps you will someday end up joining or leading a project management team in the field of healthcare? Why not?







Chapter 14
Engineering

Engineering is an example of real world utilization of project management. Engineering is the application of sciences and mathematics to create a new and innovative project that will accomplish a specific goal; this means that every engineering project is unique and must be properly managed in order to accomplish its specific goal. That is where the skill of project management comes in and sees the project through. Engineering is composed of three main concentrations: Civil, Mechanical, and Electrical Engineering.

Every concentration of engineering uses project management in essentially the same manner. The first step in engineering projects is to design the project. This step can take very little time, or in the case of large projects, the design process can be a project of its own or even last years. The design process creates

a footprint for the projects budget and schedule. After the schedule and budget have been completed and approved by the project manager, the implementation process may begin. This stage is where the project manager oversees and approves every part of the implementation process. Finally, when the project is finished, it is inspected for completeness and quality by the project manager.

Like all other real world applications of project management, there are common issues and problems that plague the application step. In engineering, some of the biggest problems are change orders; unaccounted for items required to complete the project, such as an additional 300 steel beams on a bridge project. Another big problem for engineering projects is completing on schedule; change orders and processes that are behind schedule can greatly impact a project by effecting the budget. Every additional item in the change order costs money that was not budgeted for, and every day over schedule costs an extra days' worth of labor and utilities.

A project manager in engineering is responsible for keeping the project on schedule, on budget and on point of the purpose laid out in the projects scope. This often requires a large amount of technical knowledge in engineering, project management, finance and other assorted disciplines. Each of the three main engineering concentrations mentioned above require dedicated project managers that are usually specialized in their many sub divisions.

Civil engineering is responsible for the design and construction of the private and public works we enjoy every day, including infrastructure, bridges, buildings and dams. Four of the major sub-concentrations of civil engineering include environmental, water resources, structural, and transportation engineering. Project managing in civil engineering is typically done on a larger scale than the other two concentrations; this means that project managers are not only responsible for the entirety of the project, but usually they are in charge of many other sub project managers that are specialized for tasks, such as concrete. These specialized managers allow the head manager to run a project more smoothly, even when there are over 40,000 laborers.

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Environmental engineering is responsible for things like managing waste water through systems; this can include storm drains, catchments and sewer systems. It is also responsible for is managing hazardous waste such as sewage or radioactive material. Lastly, environmental engineering plays a large role in natural resource conservation. Project managers working in environmental engineering tend to work more with permits and cultural resourcing than any of the other sub concentration project managers. Permitting is often required before projects can even break ground, especially if it is a government funded project. Also cultural resources are often required to make sure that the ground that is being altered and has no historic values, like Native American significance. These steps of permitting and cultural resourcing will consume large amounts of the project manager's time in environmental projects.

Water resource engineering includes things like dams, levees and water supply. Each of these systems we rely on every day from generating electricity, keeping the ocean out of the city like in New Orleans, and simply providing clean water at the tap to our homes. Water resource project managers are very similar to environmental engineers. They too have a large amount of permitting and cultural resourcing to do before most projects. However, being that these projects are centered around water,

the key difference between environmental and water resource project managers is the heavy use of hydrology; project managers in this sub concentration need to have a strong understanding of hydrology and its applications. If a mistake is made on a dam project and that dam fails, potentially billions of dollars of damage can accrue.

Structural engineering is another form of civil engineering that we cannot live without. Structural engineering is responsible for buildings, bridges and any other manmade structures. Lastly, transportation engineering is responsible for roads, railways, airports, shipping yards and all other forms of transportation. Structural engineering project managers are slightly different from the other two sub concentrations. Usually, all of the ground breaking permit have been completed; however, new forms of permitting are required for structural engineering along with inspections and engineering codes that must be followed to insure the safety of the inhabitants of these structures. The earliest known building code was the Hammurabi code of laws. Law 229 states "if a builder has built a house for a man, and has not made his work sound, and the house he built has fallen, and caused the death of its owner, that builder shall be put to death." Since 1775 BCE, our building codes have relaxed a little, however if a building is to collapse due to unsound building practices, there are still harsh penalties to be paid in fines and potential jail time. This can be a huge stressful burden on the project managers.

The common breakdown for job sectors in engineering is the federal, state and private sectors. Some of the major corporations in the federal sector for civil engineering is the U.S. Corps of Engineers or the U.S. Department of Agriculture. As for the state sector, major organizations include the Department of Transportation

and local cities and counties. Then in the private sector, there are far more companies than in the other two sectors, and these companies can range from local to global organizations. Each of these sectors require a different kind of project management; some are looking for a licensed engineer that has project management skills, some a professional project manager with engineering and construction skills, and everywhere in between. This makes for a wide range of job opportunities in project management, especially since civil engineering projects often require many project managers.

An example of a major civil engineering project that required many project managers was the creating of the palm tree island in Dubai. This island was created in the shape of a palm tree from over 1.1 billion cubic meters of dredged sand and



rock from the nearby Persian ocean bottom. The project started in 2001 and ended in 2006. A project of this size required a diligent and well organized lead project manager named Robert Berger who was head of a team of skilled project managers. Also, in accordance, he worked with the head Civil Engineer named Samuel O'Carroll.

This project, like most engineering projects, was not exempt of issues that Robert Berger had to manage. The main constraints that

effected this project was the 9/11 tragedy that greatly affected the travel industry to Dubai, four years of scheduled construction proved to be approximately two years too short and it turned out the project required 40,000 laborers working 24/7 over two 12 hour shifts. On top of that, Berger had to work with O'Carroll to design an island that was earthquake safe and properly protected from the oceans erosive forces. The major hidden problems included excessive erosion due to water and wind as well as significant damage to the marine ecology.

However, through all of this, Berger was able to successfully manage and complete the construction of the island. This is an example of persistence in project management and committing to complete a project no matter the problems that arise.

Mechanical engineering is a very broad field of engineering; in fact many

mechanical engineers work in departments that people would typically associate with other engineering disciplines. Examples of things mechanical engineers work with are machines, hydraulics, robotics, toys, materials, and fuels. Some projects are small while others can have lasting impacts on the world as a whole.

Machines play a part in almost every aspect of life whether we realize it



or not and mechanical engineers play an integral role in the design of these machines. One example of an engineering job is using 2-d and 3-d modeling software to help design the machine and draft the construction instructions. This is an essential part in the planning and executing stage of the project management process in that the models and the draft documents dictate exactly how the machine will get produced and put together. A mistake in the drafting stage can cause expensive complications in the execution stage of the process. If the product goes into production but doesn't work correctly it will cost time and money to "control" the situation and get to the point of producing a working product. Some classic examples of machines that engineers have worked on are cars, computers, and manufacturing equipment.

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Another common field that mechanical engineers work in is the robotics department. This can involve working on anything from a remote controlled car to a prosthetic arm or even an automatic vacuum cleaner. In the case of the prosthetic arm, the mechanical engineer would probably work on a team with various medical professionals and bio engineers. Each of their expertise will be crucial in the planning stage to produce a prosthetic that perfectly fits the needs of the user. In these cases the mechanical engineer will have the main technical knowledge on how the moving parts are going to work together to operate the robot.

Mechanical engineers also play a role in the production and use of fossil fuels. Once oil is drilled from the ground (using machines designed by mechanical engineers), it has to be sent to a refinery. There are hundreds of engineers from all three major categories involved in the design, building and upkeep of these refineries. Mechanical engineers are involved in almost every stage of refinery

work, and for the general upkeep of the facilities. The fossil fuel is then consumed by equipment that mechanical engineers also had a hand in developing such as cars, HVAC units (heating, ventilation, and air conditioning), and generators.

A fourth area that requires the expertise of a mechanical engineer is the area of hydraulics and pneumatics. This particular category has a lot of relevance in the northwestern United States where there are many dams that provide hydroelectric power. While the civil engineers are in charge of building the dams and the electric engineers take care of transporting the electricity, the mechanical engineers are responsible for helping design the machines that harness the water power and turn it into electricity. While the civil engineers will be primarily responsible for initiating the project, mechanical engineers play critical role in the planning and execution stages of the project management process for the water turbines. Mechanical engineers specializing in pneumatics have many other areas that they can work in as well such as automobile air brakes, dental tools, and even Lego design.

Just like there is a broad range of projects that mechanical engineers can work on, there is also a broad range of companies they can work for. On the federal level they can be employed by the U.S. Army Corps of Engineers, the U.S. Army, U.S. Navy, and even the U.S. Public Health Services. At the state level, governments hire mechanical engineers to help oversee projects such as public works and make sure the state is getting what they paid for. Mechanical engineers can also work in the private sector for companies such as Boeing, General Motors, Garmin, and Hallmark. Though government jobs have their perks, typically the salaries in the private sector are a lot higher and the majority of mechanical engineers work in that industry.

A relatively new invention on the market is the ambulance drone. It can be launched by an emergency operator and can supposedly cut down emergency care response time by several minutes. The drone contains a defibrillator as well



as a camera and microphone so emergency personnel can talk the 911 caller through the process of restarting the patient's heart. The prediction is that this technology could increase the survival rate of cardiac arrest patients in Europe from 8% to 80%. Creating this drone was a project that an engineering student in Europe worked on, but it could also change how other projects are operated.

Dispatching paramedics to someone in cardiac arrest is not your stereotypical project, but it has all the steps of the project management process. There is the dispatch (initiating), devising a course of treatment (planning), administering that treatment (executing), monitoring the patient until they arrive at the hospital (controlling), and handing the patient over to the emergency room staff (closing). With a new drone the planning and execution stage will both be done by the dispatcher and drone until the paramedics can come and control the situation.

The third and final main concentration of engineering is electrical engineering. Electronic engineering is the concentration that deals with the design, production

and operation of all electronic or electric based systems. Electronic engineering is an integral part of the other two concentrations from wiring buildings in civil engineering or powering electric relays or motors in mechanical systems. This concentration has grown immensely in the past few decades, due in part to the growth of its sub-concentrations and the invention of the internet. This means that electronic project managers usually need to have a fair amount of cross training when working on the interdisciplinary projects. These project managers will need to have the skills to work effectively with project managers from other concentrations, and usually adhere to their schedules. For instance, if the building has to be completed in one year, the wiring design and implementation process will have to fit exactly in the time allowed by the head civil project manager.

However, electronic project managers do not always have to work in interdisciplinary projects; in fact, there are four major sub concentrations of electronic engineering and they are electronic, telecommunication, power and computer engineering. The first of those four, electronic engineering, is the design of all electronic based gadgets from basic to complex, like flashlights or projectors. Electronic engineering is also the subdivision that designs microelectronics such as digital integrated circuits, which are the vital components of most modern electronic systems. For the electronic sub division, project managers do play a slightly different role. Most of the products that are designed in electrical engineering are very small; this means that project managers must pay the utmost attention to the tiniest details. This industry has a very small tolerance for variations. Project managers need to control quality and follow industry conventions. Say the project was to design an SD card; if the dimensions or the pins are ever so slightly off, the SD card will not fit in

the reader port, rendering the product useless. That is why proper management and monitoring of the design process must be a first priority for the project manager.

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The next major sub division of electrical engineering is telecommunication engineering. Telecommunication has three main components: the transmitter, the channel and the receiver. Examples of each component include cell phones as transmitters, fiber optic cables as channels and satellite dishes as receivers. These forms of communication transport information in the form of waves, which supplies internet, radio, and TV. Project managers working in the telecommunication sub concentration have their own set of unique tasks to manage, much like electrical engineering. Today most telecommunication devices are small digital electronics, which means project managers in this sub concentration must share many of the qualities of the project managers in the other two sub concentrations mentioned earlier. However there are some differences that telecommunication project managers must monitor, like strict Federal Communications Commission (FCC) laws. The FCC regulates interstate communications through radio, television, wire, satellite, and cable. Their six goals are broadband, competition, the spectrum, the media, public safety and homeland security, through all of which, the FCC has regulations on communication services and devices that a project manager must observe when managing a telecommunication engineering project.

Power engineering is another major sub concentration, this is the part of electrical engineering that provides electricity to all of our infrastructure and electrical systems. The first part of power engineering is generation of the electricity; this is where all three concentrations meet like in hydroelectric dams. The hydrology of

the river and dam structure is designed by civils, the turbine systems absorbing the energy of the river are mechanical and the generators that those turbines are hooked up to are designed by electrical engineers. This is the same for all other electrical generation systems such as solar, wind, coal, nuclear and internal combustion. The other part of power engineering is the distribution of electricity, usually through the means of power lines. Power lines may be strung up or buried – each have different advantages and disadvantages. Another key part of distribution is transformers; these are the devices on power poles that change the electricity voltages to different levels for different needs such as houses or street lights. Power engineers are the ones who design these devices. The role of project management in this sub concentration is again one that must work well with others' schedules and agendas. Power projects are usually on very large scales and impact vast expanses. The main difference that project managers in this sub concentration must focus on is safety, and local laws and regulations. When dealing with such large amounts of electricity, even being too close to a power supply could be fatal. This means that extra safety precautions must be observed, as well as protection for the public. Safety should always be on an engineering project manager's mind.

The last major electrical sub division is computer engineering, and arguably the fastest growing division of the electrical concentration. Computer engineers design systems that do everything from controlling your calculator, to running the internet. Software engineering is one of the largest pieces of computer engineering, as software is the code that powers websites, applications, and operating systems. This code can analyze data and return results at the speed of light. These systems and code languages have been evolving and growing at an exponential rate over the past

few decades. Computer code started with the binary—just zeros and ones—but now is really an array of languages such as Java or C++. This means that it is very easy to plagiarize someone else's code, much like copying and pasting from a book you did not write. Copyrights and code infringement is one of the biggest things that software project managers must monitor. Another thing that the project manager should watch for is regulations when building a program. Different agencies or organizations depending on the application, have different regulations for different software.

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Electrical engineering has the same breakdown as the other two concentrations for job sectors. First is the federal sector, and common organizations in electrical engineering that are a part of this sector include the U.S. Corps of Engineers and Bonneville Power Administration. Next is the state sector where common organizations such as cities and municipalities are who employ electrical engineers. However, the majority of electrical engineers are employed privately at big name corporations such as Microsoft, Google, GE, Philips, Duracell, and so on. Any corporation that designs anything with electric parts requires an electrical engineer. As well, any organization who employs an electrical engineer will use them for projects, in turn creating the demand for either project managers or electrical engineers trained in project management.

Tesla Motors, Inc. is an American founded automotive company that is on the forefront of fully electrical powered vehicles. This car company was founded in 2003 but was not profitable until 2013. However, they were not sitting idle in the ten year that Tesla was not profitable. Tesla took an immense risk and pooled everything they had into this new and uncharted industry. Before Tesla, common production

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electrical vehicles had very short battery lives, very low top speeds and with minimal luxury that was not at all popular. On top of that, gas prices were on the rise, climate change was just being recognized and major American auto industries were thriving.

In spite of all of this, Tesla sought to create change. The company was named after famous physicist and electrical engineer Nikola Tesla whose AC motor design was the inspiration and driving force of the first Tesla motor in the Tesla Roadster. This original car looked like a supercar and certainly behaved like one, competing with some of the biggest names like Lamborghini and Ferrari. The Tesla Roadster made a significant splash and paved the way for the corporation they are today. As of 2014, Tesla currently employs over 6,000 employees and is working on making contemporary and affordable cars that even the average consumer can afford.

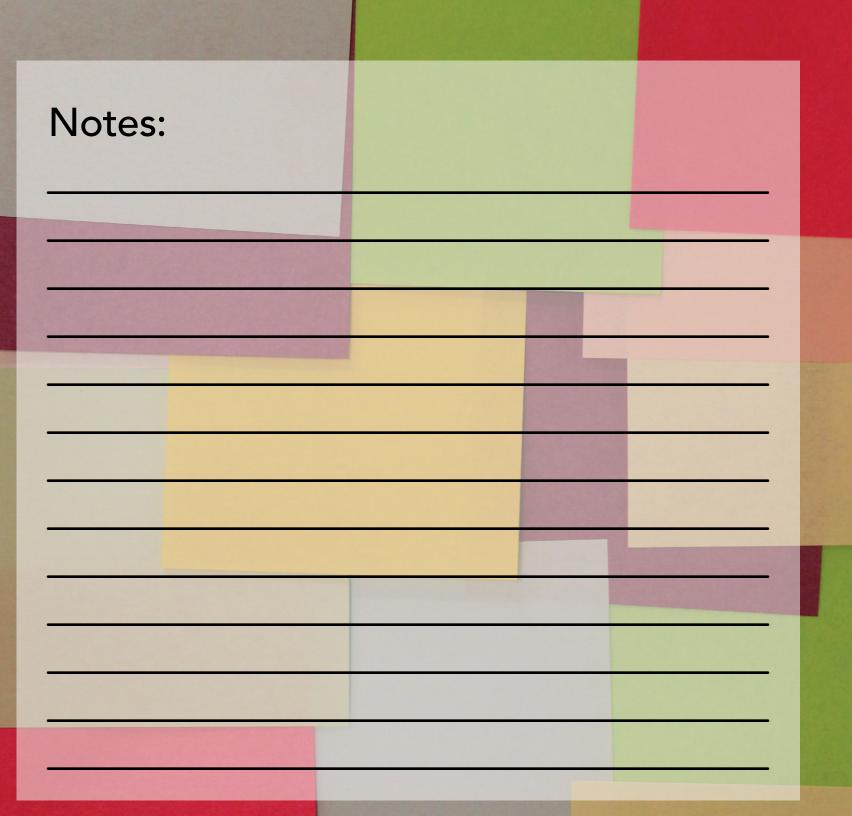
This burst into the auto industry that has paved the way for electric vehicles of the future was carefully calculated and planned. Many high class electrical engineers were on board for the advancements made in this cars' birth, and many experienced project managers were brought on as well. The project managers that were brought on by Tesla were the reason that these cars were built to standard, with high quality and in the amount of time that was required for this corporation to be a success.

These project managers fought through adversity when problems arose in these cars' design, such as when product recalls occurred. A recall also happened in 2013, when a model S caught on fire due to debris from the roadway compromising one of the battery packs. However the fire was small and contained because of

safety measures that were put in place in case of such emergencies, showing that the project manager was enforcing safety during the projects design.



Real world examples of project managers in the field of electrical engineering, such as Tesla, show that there are many needs for project managers in electrical engineering. Without the skills of project management, corporations such as Tesla would not exist, nor would many of the other electronics and electric devices we all love.





Chapter 15

Faith Based Organizations and Churches

Projects and project management are an integral part of any faith-based organization or church. If you are part of a church or know someone who is, you will be part of a project. This is because almost everything churches do are projects; the leaders who stand at the helm of these diverse organizations speak with authority to "Go into all the world", "build temples, heal the sick, speak for social justice", "Do projects!" Churches are, or at least ought to be, full of individuals wanting to be used in world-changing projects.

People within churches of various denominations find meaning by completing projects that change the world for the better; in terms of the environment, basic human needs, social justice, or spiritual teachings. The very structure and beliefs of the church demand that projects be done!

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Before we dive into some of the exciting projects that churches are doing right now, we need to understand the underlying structure from which they draw their support and funding.

There are two basic types of churches these days: congregational and denominational. Congregational churches are those that independently run their affairs. Denominational churches are churches that have larger structures behind them. An example to help you remember is to think of congregational churches as small local businesses and denominational churches as large national corporations.

So where do these churches draw support for their special projects? Congregational churches will ask for donations from the members in various ways. They may put on small projects such as a car wash, banquet or other type of fundraiser to earn money to implement their plans. Completely autonomous and free from denominational ties, they can execute with speed. Many times these churches are made up of members who are devoted and willing to part with their resources to fund whatever project the church is undertaking. Examples of projects that congregational churches take on include:

- 1. Creating and maintaining food banks
- 2. Establishing warm centers in the cold winter months
- 3. Creating and sustaining homeless shelters
- 4. Going overseas to give aid in various forms (i.e. mission trip)
- 5. Organizing Relay for Life or other charity events
- 6. Conducting a kid's summer program

All of these projects require project planning and management. Every churches' success in reaching out to their community is dependent on their members' ability to execute successful projects with project management skills.

Denominational churches can do the same projects as the congregational churches, but have a larger organization with extra resources and experienced leadership behind them. Obtaining funding and support is done on more of an official level at that point; this brings a more professional level to project management and allows for more resources and experience. Many times, however, there is the danger of bureaucracy and lack of momentum because of the need to conform to denominational standards. Besides, denominational churches are just plain big, and it's harder to get big things moving.

If you are doing a project for a "normal" business, you will notice that the types of credentials and skills your employees have are rather uniform while those with beliefs and cultures will differ. It is usually the opposite with churches: beliefs are more uniform but the levels of professionalism, socio182 Chapter 15 – Faith Based Organizations and Churches

economic status, culture and many other factors vary widely. This means that unlikely leaders and unconventional approaches are the norm, not the exception. Consider the case of Phil Robertson: his bushy beard and even bushier attitude are not what most people expect when it comes to the typical church member; yet Phil is an integral part of his son's church: The White Ferry Roads Church. And WFR Church is taking advantage of this wily congregant by the implementation of a new project called "Phil Robertson Presents the Gospel."

WFR Church is using Phil Robertson's unconventional camo-garb and duct-taped Bible for a very successful project: Phil not only brings in a number of people to the physical church location every Sunday, but WFR is able to reach out to their web audience by posting his talks every week.

If you are involved in project management in the church setting, it is important to realize that candidates for project leadership that normal businesses would consider unqualified or unconventional will work fine in a church. Sometimes the unconventional is all you have; if you would look into the churches of today you would notice that a lot of projects are led by "normal-looking" people. That is because in church project management you don't hire or choose your people; they may be different, unconventional, maybe even a little strange, but they get the job done and do it surprisingly well.

Project management within the church is successful not only because of the diversity of its members but because of the amount of zeal that church members tend to have. Church projects aren't done for a wage but

rather out of a desire to fulfill the church's mission. That means motivation is already a big factor, and a lot of work can get done for free.

Local church projects

The First Presbyterian church in Florence, Alabama started a wave of warming centers during winter's coldest weeks to help the homeless in their community. Lots of people came, and it was considered a great success and help. Other local churches in town followed suit, with at least 13 more of them opening their doors to warm the cold people outside; this is an example of how churches can implement project management principles to start small but meaningful projects in their own town or city.

Faith-based organizations

Local churches can be a force for change in their community by executing different projects. Sometimes, though, the problems they are trying to address are bigger than they can take on alone; this is where faith-based organizations come in. Local churches can team up with each other and larger faith-based organizations to make an even bigger impact – at home or abroad. Consider the local churches in Portland who banded together to fight the prevalent human trafficking that was occurring in their city by forming a faith-based organization:

In 2010, Dan Rather took his cameraman down the streets of Portland for a Dan Rather Reports series called "Pornland." He, and other newscasters like Diane Sawyer, noting the numerous porn shops and adult stores, decried the abominable amount of child-sex trafficking going on, and labeled the city the "epicenter of child prostitution."

Local churches, concerned with the tarnishing of their beloved city's namesake and with a holy zeal to fight the injustice of human-trafficking, banded together and formed a faith-based organization to combat this great evil. It all started when Esther Nelson, the program manager of the human trafficking division of the Sexual Assault and Resource Center (SARC), scheduled a meeting with her pastor to see how she could "live her faith" in a secular world. While this meeting was going on, both Esther and her pastor came up with the idea of starting a faith-based organization that helped fight the prevalence of human trafficking in their town. Many meetings, committees and months later, the Oregon Center for Christian Voices was formed. The Oregon Center for Christian Voices is an example of a faith-based organization that formed to address local problems through project management. Nelson's church, and many others trying to combat the human-trafficking industry in their city joined forces to form a faith-based organization that has become Portland's flagship nonprofit for executing projects that make it harder to sexually exploit children. The OCCV has also equipped churches to plug their members into the project goals. Members like artist Martin French who came up with the Exile Poster Project, put up posters that engaged the community to do something about their human-trafficking problem.

One poster reads like a giant sticky note delivering a to-do list for Portland: "Be bike friendly," "Make coffee roasting cool," "Open a million food carts," "Stop having sex with kids." Only the last item isn't crossed out.

And it's not just poster projects. The OCVV has acquired \$500,000 grants to assist their county in fighting this problem; they have gotten permission to send orange stickers listing the National Human Trafficking Hotline number to all

the 11,000 liquor-serving and selling establishments in the state of Oregon and have participated in many education and awareness projects and opportunities. Projects and project management take on a variety of forms with this faith-based organization and are essential to making sure the streets of Portland are safe for kids.

People of Peru project

Paul Opp, a successful businessman and project manager, went on a mission trip to Peru with his daughter's high school. Little did he know that he would end up starting an orphanage and help center that sponsors hundreds of church and school mission trips each year! The People of Peru Project in the landlocked city of Iquitos, Peru is an organization that allows churches and other volunteer groups to stay at their facility and help with the different needs and projects that People of Peru Project needs to perform. Whether it's a local church wanting to host a Bible seminar, a group of students from WSU offering medical care and check-ups, or a church wanting to help build a new multi-purpose building, the People of Peru Project is a place that allows churches and other organizations to apply the principles of project management in a real-world setting!

For example, the people of Iquitos are always in need of dental and medical care. The People of Peru Project often spreads the word of work that needs done through newsletters, social media and various speaking engagements. This allows for a wider range of people who know about the projects, and allows for those who wish to become involved in any way possible

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to do so. This is what happens when churches and faith-based organizations work together: project management that results in changed lives.

ADRA

Other Faith-Based Organizations are the result of members and churches within a specific denomination who see the need to use their vast resources on more than just the local level. The Adventist Development and Relief Agency (ADRA) was established in November 1956 by the Seventh-day Adventist Church to provide humanitarian relief and welfare. Everything ADRA does is a project. If it's drilling wells, setting up medical clinics, helping with agriculture programs, promoting health workshops, or tapping into their huge donor network to ship food and water out to starving children, it's all executed as a project with careful planning and expert project management.

"relief and welfare"

ADRA is also equipped to respond to disasters. It was the only non-governmental agency to stay in Rwanda during the Rwandan genocide of 1994, it was a major project planner and operator during the Indonesian Tsunami of 2004, and is on the ground at almost every recent disaster implementing projects that help in a big way. ADRA now employs

thousands of staff members and has a network of over 130 countries where they conduct their projects of compassionate humanitarian service.

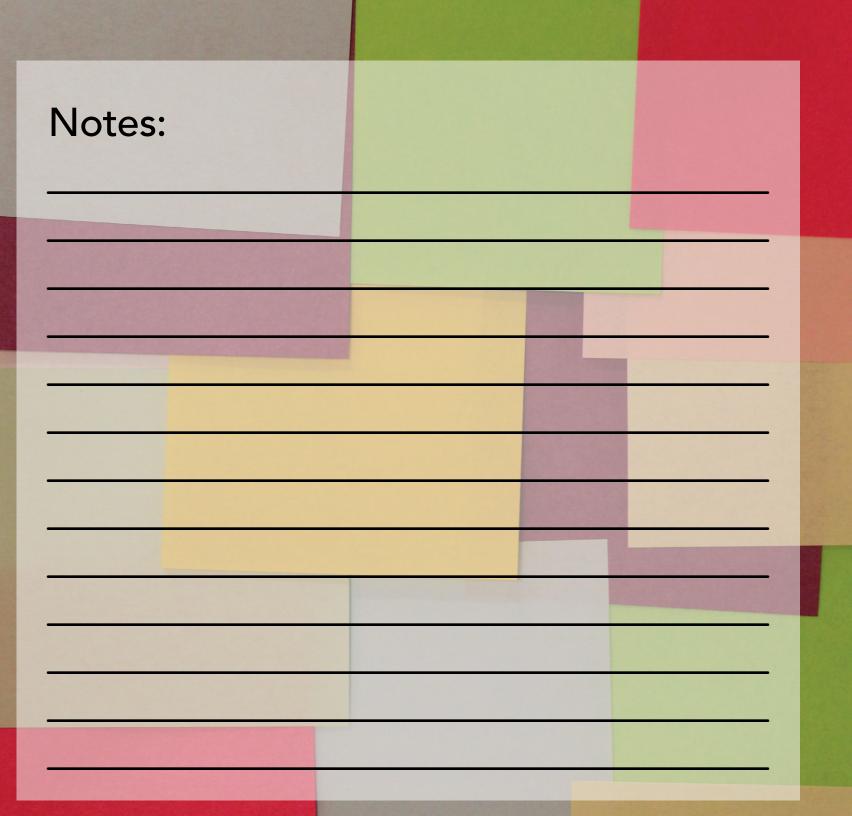
World vision

Another faith-based organization that is similar to ADRA but is not affiliated with any specific denomination of Christianity is World Vision. Over 80 countries regions all around the world from South America to the Middle East benefit from World Vision's work.

World Vision is mostly known for its sponsorship model. As you enter their website requests are put forward to you to sponsor a child or project for an amount like \$35 a month. World Vision can provide education, food, clean water, economic stimulation or other things through sponsorships.

Even from a cursory glance at World Vision's marketing and web presence, you can see that what makes them function is projects. Their 4-fold plan as pitched in their promotional video: Listen, Develop, Act, Train is similar to many project management models and is evidence that skilled and thoughtful project managers are leading this great faith-based organization.

Churches and Faith Based Organizations are big on projects. One could even go so far as to say that their existence is somewhat diminished without the implementation of projects and project management into their core practices. This section has provided only a few examples of projects and project management within a handful of churches and organizations.



Additional Resources

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Chapter 16

Additional Resources

A common issue that plagues professionals in many fields is that age-old threat of being replaced. Nobody wants to think of themselves as the first name to strike off the list when a budget shrinks unexpectedly. So what are your options for establishing a more permanent residence for yourself? First potential plan: become the President of the United States. Nothing says irreplaceable like being elected to lead one of the world's powerhouses. Maybe that route isn't for you though. If that's the case, a reputation of investment and initiative in any field will help your permanence.

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There are many opportunities for becoming noted as an experienced project manager. Even though I trust you to turn to your pal Google, we'll take a look at ways that you can get involved in projects.

Experience through practice

The first, most camouflaged opportunity to gain the rep as THE project manager would have to be searching for project prospects where you are. Scouring for opportunities will generally lead to discovering some. Once you've found a good project, take the first step and ask how you can get involved and support the initiative. Depending on the project, there are different roles that teams need to succeed. Even though being involved in a team isn't the same as managing the team, exposure and involved to the processes of project management will give you valuable experience. Once you're comfortable with the role of leading a team and project, you're ready to either accept a designation to be a leader or pitch your idea to controlling stakeholders. Leaders need to be comfortable with the project process and management principles that ultimately decide success.

After a lifetime of experience in project management, find yourself a mountain in the Himalayas, sit down, and wait for people to seek out your wisdom. Okay, maybe don't get that extreme, but those in pursuit of projects similar to ones you've successfully accomplished will seek you out for the opportunity to gain some of your insight. Even if you're not interested in being heavily involved with projects for the rest of your career, you can always continue to assist by simply sharing your exposure to and familiarity with the principles of project management.

As a college student, there are thousands of opportunities to be involved with projects all around you. Classes, especially those focused on very specific things, will often times direct you to work with teams, new information, and all towards a desired result. Clubs, sports teams, musical groups, and other extracurricular functions are focused on their next project – often operating on cycles of projects. Student governments will also be prominent opportunities to address issues or work toward improvements; these are all great opportunities to lead or get involved with a project! If you're not satisfied with those options, the culture of college campuses are generally easier for starting grassroots movements or groups, so you could in theory even create your own interest.

In the professional world, being involved with projects provides clear advantages. Often times, initiators, planners, and accomplishers will be subjected to fast and easy promotions. Once you understand your job description, taking a step beyond and reaching out to contribute to the organization is extremely valued. Even though any extra effort earns respect, major initiatives will make you the favorite candidate for greater responsibility. Gaining extra grant support, starting a profitable department, or developing a supplemental program are examples of big things you can achieve with the appropriate investment.

Even outside of academia and professional circles, projects are a huge part of life. Going through annual tax returns, having a child, renovations, putting together a significant event; these are all things that can be better executed with project management principles. Even though some lifetime projects don't need the same formal process, many of them could be elevated and much less frustrating

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with an appropriately modified process. Many people eventually get involved in organizations that would require project management as well; PTA organizations, non-profit charitable organizations, and local governments are just a few.

Outside accreditation

Believe it or not, Project Management on its own is a real thing. Maybe it's just the fact that any describable task can become a career in today's day and age, but that's not why Project Management is rapidly spreading through many industries. Project management is a component of business that focuses intentionally on continual growth and the appropriate management to do so. The first step to decline is stagnancy; continually pushing forward with innovation and optimization is the single most important characteristic to thrive.

Did you know that besides his many roles as an author, diplomat, inventor, physicist, politician, and printer, Benjamin Franklin was a project manager? Well you better believe it. Even if not expressly stated, this guy knew his stuff. It's hard to succeed without some of the concepts that we've covered in these few chapters. These characteristics of one of our founding fathers demonstrates the amount of significance that considerable experience can offer. When Franklin took it upon himself to write the nation's first book on financial advisement, he stated that "an investment in knowledge always pays the best interest". An idea that is becoming remarkably relevant in our present, we have to recognize the fact that simple practical experience, certifications, and endorsed qualifications are necessary in competitive arenas.

Of course, as we so often see, capitalism responded in kind and there are multiple ways in which a person can gain certification or endorsement as a project manager. Many jobs require such certifications, but a certification that attests to your ability to manage a team, a budget, resources, stakeholder expectations, and time can only bolster your position in any other job scene.

An easy way to preemptively gain accreditation as a project manager is to intentionally go to a college or university that offers a certificate. This offering is increasingly available and is the best way to get certified without deviating from your life's course too much. Notable institutions that offer such certificates include Boston University, Devry, and the illustrious Walla Walla University. These certifications may reinforce a resume, but they also prepare you for more extensive professional certifications.

If you're not considering enrolling in college or if you want to focus more on marching band or chess club, that's perfectly fine too. Even more reputable than most college certifications, professional certifications are available to anyone willing to put in the time and effort needed. Though there are a variety of different organizations that offer training and accreditation in project management, I'm going to touch on a couple of the big dogs in the field. One last point to consider before diving in; the certs that I'm going to cover are for generic project management. If you are in a role directed towards specific kinds of project or industry, there are "specialty" project management certifications that you should look into first. Alright then, for all of us average folk, let's dig in.

Project Management Institute. PMI is a frontrunner in the field of project management certifications. If you're seeking out a competitive project oriented job in a large company, chances are you're going to run into more than a few competitors that have a certification from PMI. More and more, employers are actually requiring certifications for project management as well, upholding PMI certificates as the gold standard of excellence. Their credentials are widely accepted, reaching over 180 countries in every industry. If you're serious about being known as THE project manager on the block, check them out as soon as possible. Don't even finish the book right now. I'll be waiting here when you get back, no worries.

Not in it for the best of the best? Wait before you check out some other options. PMI has a wide array of certifications with programs targeting project practitioners of all levels of skill and experience. With broad certifications that deem you worthy of planning some epic things, there are credentials available to satisfy any level of serious interest. Though there are 8 general programs that PMI offers, I'll welcome you in to the ground floor with the ones that are easier to obtain. I wouldn't consider it low-hanging-fruit, but you can do it pal.



PMI Certified Associate in Project Management. This certification is the appetizer on PMI's menu. A certified CAPM will be familiar with all the terminology, tools, and processes used in project management. Even though this is an entry level certification, you must have at least 1,500 hours of project experience prior to enrolling and students must pass an exit exam before receiving their five year certification.

Other certifications offered through the PMI include Project Management Professional, Professional, Professional, Portfolio Management Professional, PMI Agile Certified Practitioner, PMI Professional in Business Analysis, PMI Scheduling Professional, and PMI Risk Management Professional. Each is pretty well defined by their titles, but I would definitely recommend looking into them when you're in the process of developing your five year life plan. Having a good long-term goal in mind like a reputable certificate will help steer and motivate some of your current ambitions.

GAQM

Global Association for Quality Management. The GAQM provides a very wide variety of business certifications and is committed to training and informing candidates

to prioritize quality in while effectively accomplishing goals. Though GAQM focuses primarily on management science and information technology, they do offer courses that are only for project management. Since their focus is on the ever changing pinnacle of technology, their certifications offer very valuable insight into being a project manager who is not only aware of what modern tools are capable of, but also able to use them effectively in projects.

The American Academy of Project Management. The AAPM is a rival to the PMI. The AAPM was developed in the past 20 years focusing on government processes. It offers a much wider range of potential certifications and even offers certification through a number of colleges and universities.



Stanford Advanced Project Management. Stanford University offers a program for students and outside candidates

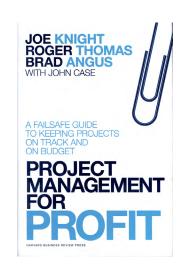
to gain experience managing projects with a particular emphasis on melding projects with a greater organizational context, prioritizing projects within strategic initiatives, and pursuing global success. This academic approach focuses on the crucial link between strategy and implementation, instructing on the process and even leading team that doesn't have the same broad perspective. Candidates who complete the course will gain certification as Stanford Certified Project Managers and will gain not only the resume boost from being accredited as project managers, but will also be able to associate themselves with Stanford University.

Extra Reading

Before we're quite done though, I'd like to leave you with the story of Sam Van Eken. Eken is a mix between a green thumb and an artist that recently revolutionized the field of grafting by developing single trees that produce 40 different kinds of fruit. If you've got a small backyard and you need fresh fruits to live, you're welcome! Though this book does contain some very original concepts, it is also an effort made possible by gathering experience and knowledge available through a variety of other sources. Our hope is that you've gained comprehensive insight into project management, but if you'd like to look into some additional resources, here are some books that come highly recommended by our resident expert. I know you bookworms are just dying to get out there and consume some more knowledge.

The New One-Page Project Manager. This book offers a nontraditional yet practical guide for accomplishing projects with extremely simplified and condensed organization. The book focuses on how to effectively communicate essentials and follow every variable and moving component along the way. Project

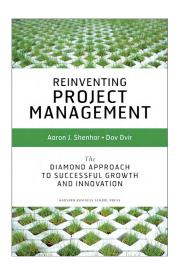
managers who utilize this tool will be able to bring a wide array of stakeholders up to speed and save time and effort spent on maintaining sufficient involvement.

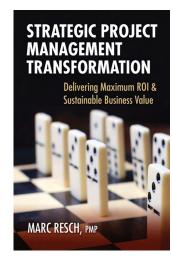




Project Management for Profit. Project Management for Profit is an optimized model that works towards managing projects that will always meet schedules and keep involved parties well-informed and invested. Believe it or not, the book also emphasizes budget awareness and tools and processes to maximize returns on investments. The book targets beginners and offers a brief guide to readers with helpful tips and principles on basic project management.

HBR Guide to Project Management. The Harvard Business Review put out this guide just a couple years back that addresses key components of project management. The guide prioritizes assembling and building a strong, focused, team. Second, readers are brought step-by-step through the process of breaking down major objectives and goals into smaller manageable tasks followed by comprehensive scheduling. Next, the book addresses the continual processes of monitoring and managing stakeholder expectations. It concludes with guiding readers on project completion and gauging success.





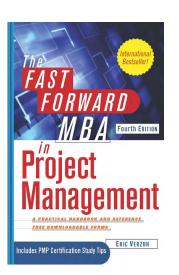
Reinventing Project Management. This book, offered through the Harvard Business Review press, zooms in on the reason why projects fail. There are very real obstacles between idealized concepts and a dynamic business culture, and this book provides a new, highly adaptive model for the process of project management that will lead to better results.

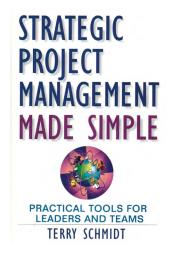
Strategic Project Management Transformation. This book is a very useful tool that focuses on the reality of the changing significance of projects within organizations. Stakeholders are generally less interested in the simple success or failure, profit or loss, or budget actuals of projects. Modern organizations prioritize projects that not only fit in within strategic initiatives and missions, but provide the opportunity for significant future investment. The transitional phase in which deliverables are transferred to operational teams is a key weak link in the scope of maintaining value and potential future investments. This book tackles the hurdle head on and trains readers to develop projects that will be more resilient.

J. Ross Publishing offers a variety of other resources

that are valuable for other aspects of project management as well.

Fast Forward MBA in Project Management. This book's primary objective is to serve as a desk reference for both experienced and novice project managers. It

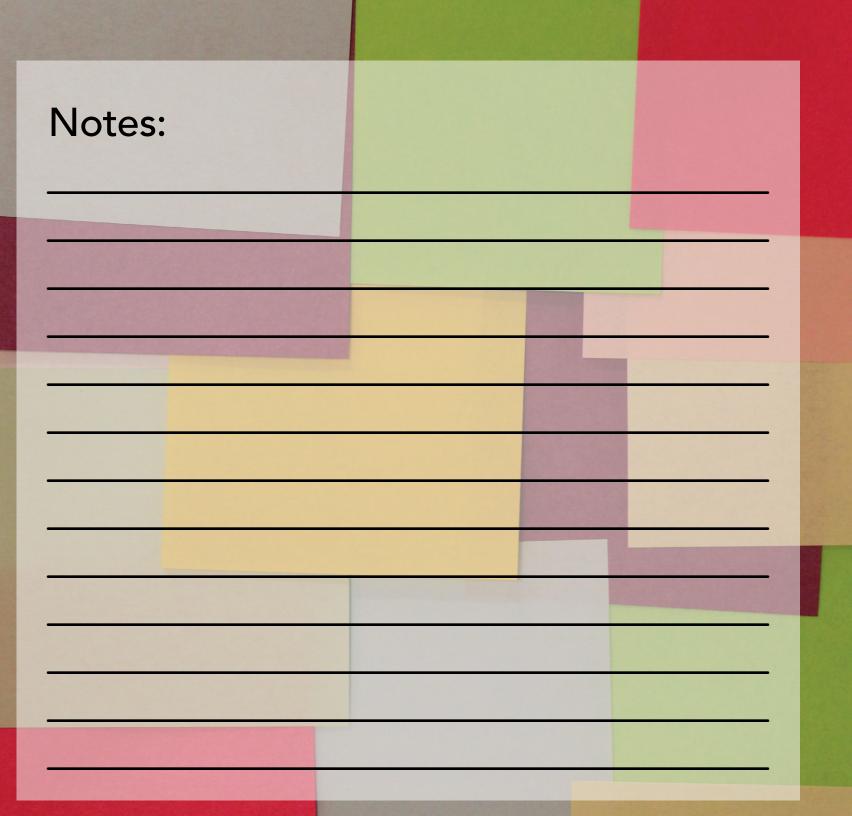




covers major concepts and gives instructions for creating instructional and operational project documents. Readers will be given tools for providing a common system of project management for an entire organization.

Strategic Project Management Made Simple.

Projects often become overly complex and project managers can easily lose sight of the simple foundational concepts that define and drive initiatives. This book is one of the first tools that guide readers through each step of managing a project while simultaneously facilitating interactive thinking to maintain a healthy perspective and investment in projects. Far too frequently, we need to take a step back and reevaluate, and this book provides a practical way for project managers to do so.





Sources

Chapters 1 and 2

Communication Plan: Project Management Communication Plan Template Free. (n.d.). Retrieved from http://communicationplanstoday.blogspot. com/2010/07/project-management-communication-plan.html

Kevin Plank - "Becoming a Successful Entrepreneur". (2011, February 24). Retrieved from https://www.youtube.com/watchv=C8zI1mc mEkM&list=PLnbNCoW8AXL9IT4pWuTwNP-yETxf9KqUR

Kevin Plank rockets past Steve Bisciotti on Forbes list of richest Americans - Baltimore Business Journal. (n.d.). Retrieved from http://www.bizjournals.com/baltimore/news/2014/09/29/kevin-plank-

204 Sources

Sources 205

- rockets-past-steve-bisciotti-on-forbes.html?s=image_gallery
- Retrieved from https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcT25-_X366g-fRjAtKjrGNK4gazRj-f7td594SOZWVV9U7FP19puA
- Threlfall, D. (2014, July 21). Seven Shocking Project Management Statistics and Lessons We Should Learn | TeamGantt. Retrieved from http://teamgantt.com/blog/2014/07/21/seven-shocking-project-management-statistics-and-lessons-we-should-learn/#sthash.z2I34hNj.dpuf
- Under Armour Startup Story -How Founder Kevin Plank Built Under Armour. (n.d.).

 Retrieved from https://www.fundable.com/learn/startup-stories/under-armour
- Warren, R. (2002). The purpose driven life: [what on earth am I here for?]. Grand Rapids, MI: Zondervan.

Chapter 7

- Figure 1: Leyden, A [graphics designer]. Retrieved February 6, 2015, from: https://www.examtime.com/blog/6-tips-on-how-to-create-an-online-mind-map-with-examtime/
- Figure 2: Morrison, T [graphics designer]. (2015). Midndmap in Bubbl.us [image].
- Figure 3: Morrison, T [graphics designer]. (2015). Midndmap in Edraw [image].
- Figure 4: Morrison, T [graphics designer]. (2015). Midndmap in Microsoft Visio [image].

- Figure 5: Schlinsog, E [graphics designer]. (2015). Gantt Chart in Tom's Planner [image].
- Figure 6: Schlinsog, E [graphics designer]. (2015). Gantt Chart in Gantter [image].
- Figure 7: Schlinsog, E [graphics designer]. (2015). Gantt Chart in Microsoft Project [image].
- Figure 8: Basecamp is everyone's favorite project management app. (n.d.). Retrieved from https://basecamp.com/
- Figure 9: Wrike Project Management Software & Online Collaboration Solutions. (n.d.). Retrieved from https://www.wrike.com
- Figure 10: Business Intelligence: Dashboards, Reporting and Analytics | Domo. (n.d.). Retrieved from http://www.domo.com

Chapter 10

http://education-portal.com/articles/Best_Project_Management_ Schools_List_of_Top_US_Programs.html 1-28-15

http://urbandreams.ousd.k12.ca.us/

http://www.theatlantic.com/misc/global-report-card/

http://www.pmi.org/Business-Solutions/~/media/PDF/Case%20Study/HP_case_study.ashx

206 Sources Sources 207

http://urbandreams.ousd.k12.ca.us/about_partners.html

Chapter 13

Federal Mandate for Electronic Medical Records | USF Health News. (n.d.).

Retrieved from http://www.usfhealthonline.com/news/healthcare/
electronic-medical-records-mandate/#.VPAJarPF9ew

The Toyota Way - Wikipedia, the free encyclopedia. (n.d.). Retrieved March 11, 2015, from http://en.wikipedia.org/wiki/The_Toyota_Way

Virginia Mason Production System, VMPS | Seattle. (n.d.). Retrieved from https://www.virginiamason.org/VMPS#Benefits

http://www.usfhealthonline.com/news/healthcare/electronic-medical-records-mandate/#.VPAJarPF9ew

http://en.wikipedia.org/wiki/The_Toyota_Way

https://www.virginiamason.org/VMPS#Benefits

SVO Interview

Chapter 14

Bright Hub. (2012, October 25). Image Gallery - 15 Great Civil Engineering Feats. Retrieved from http://www.brighthub.com/education/homework-tips/articles/124775.aspx

Greg Peterson Inspections, Inc. (n.d.). The Earliest Known Building Codes.

Retrieved from www.gregpetersoninspections.com/hammurabi.htm

Inquistr. (2014, November 10). Flying Defibrillator 'Ambulance Drone'
Developed To Bring Down Response Time. Retrieved from http://
www.inquisitr.com/1599402/flying-defibrillator-ambulance-droneunveiled-can-bring-response-time-down-to-a-couple-of-minutes/

Wikipedia. (n.d.). Federal Communications Commission - Wikipedia, the free encyclopedia. Retrieved March 10, 2015, from http://en.wikipedia.org/wiki/Federal_Communications_Commission

Wikipedia. (n.d.). Palm Islands - Wikipedia, the free encyclopedia. Retrieved March 10, 2015, from http://en.wikipedia.org/wiki/Palm_Islands

Wikipedia. (n.d.). Tesla Motors - Wikipedia, the free encyclopedia. Retrieved March 10, 2015, from http://en.wikipedia.org/wiki/Tesla_Motors

Chapter 15

About Us - Our History - ADRA. (n.d.). Retrieved from

http://www.adra.org/site/PageNavigator/about_us/history.html

Congregational church - Wikipedia, the free encyclopedia. (n.d.).

Retrieved March 10, 2015, from http://en.wikipedia.org/wiki/Congregational_church

208 Sources

Duffy/ADRA, J. (2013). ADRA Annual Report 2013. Retrieved from

http://www.adra.org/site/DocServer/2013annual-report.pdf?docID=3301

Inside the 'Duck Dynasty' church. (n.d.). Retrieved from

http://www.christianchronicle.org/article/inside-the-duck-dynasty-church

More congregations offer help as warming centers | WHNT.com. (n.d.).

Retrieved from http://whnt.com/2015/02/18/more-congregations-offer-help-as-warming-centers/

People of Peru Project - Home. (n.d.). Retrieved from

http://www.peopleofperu.org/

Phil Robertson Presents The Gospel - WFR Church. (n.d.). Retrieved

from https://wfrchurch.org/2015/01/08/phil-robertson-presents-the-gospel/

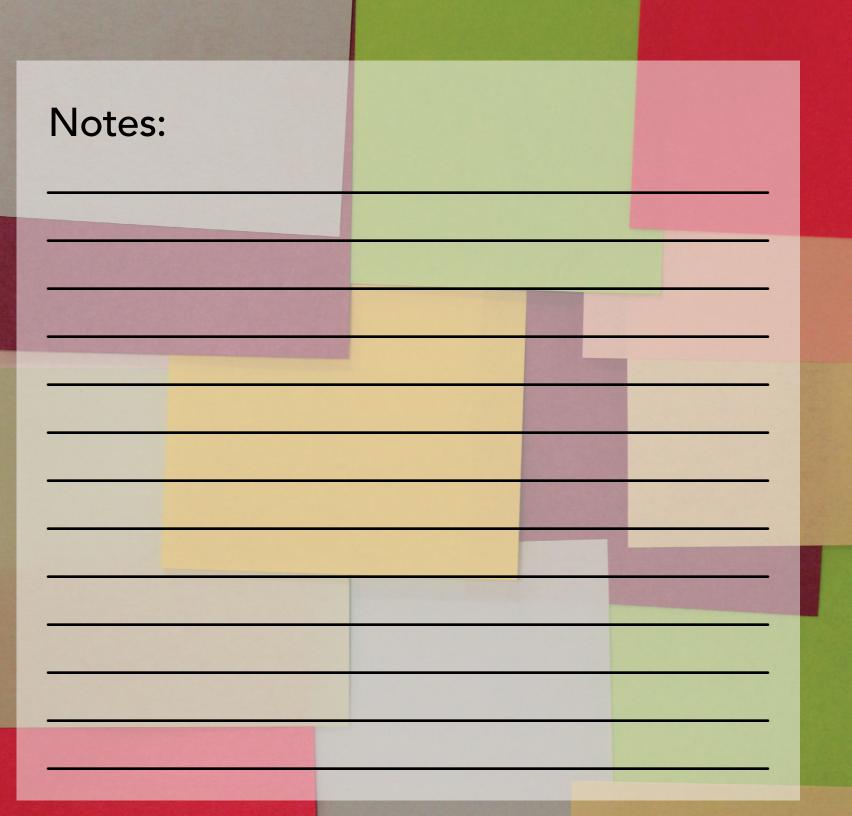
Portland's Quiet Abolitionists | Christianity Today. (n.d.). Retrieved from

http://www.christianitytoday.com/ct/2011/november/portlandabolitionists.html?start=1

Sponsor a Child Change a Child's World | World Vision. (n.d.). Retrieved

from http://www.worldvision.org/m/sponsor-a-child?campaign= 1193512&gclid=CLnXxrGGlMQCFdgUgQodR5gAsg

Sources 209





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