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July 2018

Project Management?

Cheops Law: "Nothing ever gets built on schedule
or within budget."

-- Robert Heinlein

Learning Objectives

By the end of this module, you will understand some basics about project management:

1. Career management, life management
2. *Manage, Lead, Transform* (MLT)

3. What I'm not going to talk about:
   a. Scheduling/deadlines
   b. Resources (funding, equipment, support)
   c. Various Project Management Methodologies: (Waterfall, CPM, Agile, Six Sigma, etc.)

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My Background in Project Management

➢ Ran a small contracting business in Nelson (landscape main-tenance and design, general contracting; developed an estimation program for bidding that involved personnel, timelines, materials)

➢ Set up the crisis line on campus (supervised 20-25 students)

➢ Taught as part of MSAT (communication skills)

➢ Taught part of ENSC 803 (communication skills)

➢ Coordinate ENSC Communication Program (wide range of concerns and expertise)

➢ Largely a **program** manager – and not so much a **project** manager

➢ A program manager deals mainly with fixed expectations, budget, timelines; these issues are often more variable for project managers in industry.

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Introduction

1. Are you considering working as an Engineer in industry?
2. Are you considering and entrepreneurial career?
3. Are you considering going to grad school?
4. Are you considering a research career in industry or academia?

If you answered YES to any of these questions, then you NEED a course in project management.

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Why Develop Your Skills?

➢ Technical specialists have a limited time span before their skills become obsolete. It is currently estimated that **you will change your career path four to six times** in your working career.

➢ Advances in technology are quickly making many technical positions obsolete. Two to four years from now, you may well be out of date. **Your technical skills should be considered low-value skills.**

➢ In other words, you need to **focus on the high-value skills** that will not become obsolete so quickly.

➢ These involve **critical and creative thinking skills, people skills, management skills, adaptability, and high-value technical skills (systems & biomedical?)**.

Average Engineering Salaries in Canada

1. **Physics Engineers:** 105K (limited supply)
2. **Systems Engineers:** 85K (growing need due to systems complexity!)
3. **Project Manager + BASc:** 85K (growing need -- people skills!)
4. **Computer Engineers:** 75K (shrinking need due to over-supply?)
5. **Electronics Engineers:** 65K (static?)
6. **Biomedical Engineers:** 60K (growing need due to aging population!)

➢ Where is your value-added for a potential employer?
➢ What is the quickest way to increase your value to a potential employer?

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What is PM Really About?

➢ Project Management is often taught as being about calculations of the time, resources, and costs involved in a development project. Certainly, many texts make this assumption as do various courses on the topic.

➢ The reality is that software (such as MS Project, etc.) can easily deal with these issues. Enter the appropriate data, and software can provide you with a useful framework for the project management.

➢ Adept Project Managers, on the other hand, are best able to deal with the people involved in a development project. They can provide the value-added which the software cannot. They are able to determine the course of action most likely to provide positive results.

An Important Note

➢ This lecture is intended purely as a brief introduction to project management. If you are interested in learning more about project management, consider some of the following resources:

❖ **SFU**: ENSC 820 is a 3 credit, 13 week, course

❖ **Mitacs:** Two, 2 day workshops

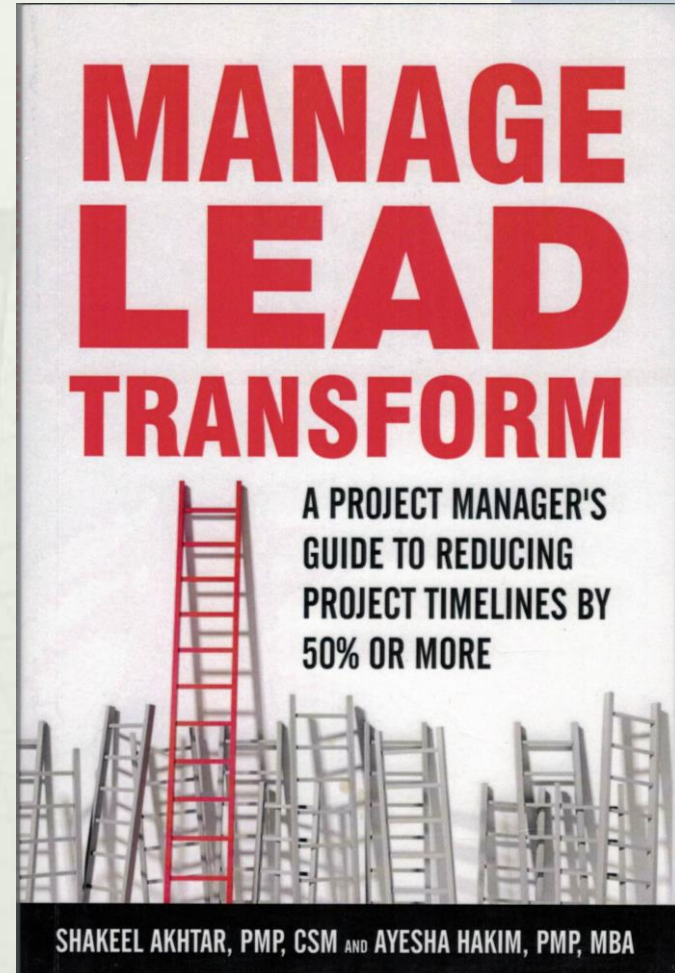❖ **SFU Continuing Studies**: A certificate program in project management

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Some Useful Texts
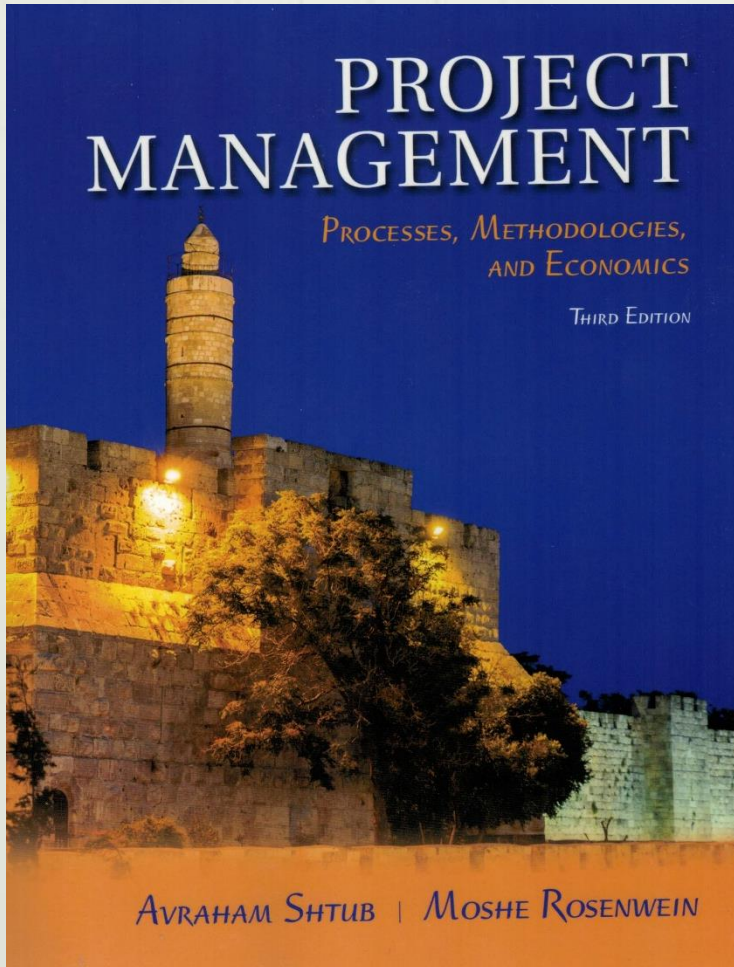
Technical in content, 706 pages, $238.

Conceptual in content, 144 pages, $12,
Recommended

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Acknowdgement/Reference

Most of the following material has been adapted from

Shakeel Ashtar and Ayesha Hakim. 2017. **M**anage, **L**ead, **T**ransform: A Project Manager's Guide to Reducing Timelines by 50% or More. www.p3alphaconsulting.com. Available via Amazon.ca.

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Some Stats from MLT

➢ Average IT project delayed by more than 200% (i.e., 2 week project takes 6 weeks).

➢ Excluding research and construction projects, 75% of projects fail; average success rate for IT projects is 16.2% (9% for large companies).

➢ Over $250 billion yearly is spent on IT projects in the US.

➢ 1/3 of workforce are considered engaged in their jobs; thus, 2/3 are disengaged.

➢ 75% of engaged employees are working on managing crises (many of those crises are caused by disengaged employees).

➢ Astute project management may be part of the remedy.

Differences between High & Low Performing Teams

High Performance Teams (A, B)	Low Performance Teams (C, D, F)
High morale	Low morale
Most risks are identified early because team members take ownership and are proactive	Critical risks are not identified because team members are disengaged
Risks rarely turn into issues	Most risks turn into issues
Big issues look small	Small issues look big
Many tasks are done earlier than estimated	Most tasks are done later than expected
Most outcomes are positive	Most outcomes are negative

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Structure of MLT Model

➢ **Manage** (1-7) for entry level employees:

      • Action Steps:

          ✓ Mindset (where to start)

          ✓ Strategy (how to proceed)

          ✓ Measurement (were you successful)

        . . . .

➢ **Lead** (1-5) for Project Managers:

      • Action Steps: . . . .

➢ **Transform** (1-3) for Senior (Project) Managers:

      • Action Steps: . . . .

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Manage 1: Own Your Tasks

➢ Change your mindset to feel you have a choice. The choice of working on the tasks that have been assigned because you have applied for the job. No one forced you into the job.

➢ Find meaning by drawing a line of sight from the lowest level of your tasks to the highest mission/goal for your company.

➢ Measure your highest value tasks to know which tasks give you the most bang for the buck.

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Manage 2: Task vs. Project

➢ Change your mindset to understand that it is way better to spend a little bit more effort upfront to know a task from a project.

➢ Review all your tasks to make sure every task starts with an action verb in the present tense.

➢ Estimate at a high level to know the approximate time it will take to do the tasks with the focus of understanding that there is no project hidden in the task.

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Manage 3: Task Break Down

➢ Mindset change is to understand that "we" doesn't do it when it comes to tasks, and so you need to make sure that high-level tasks are broken down in such a way that there is one task per person.

➢ Tasks that need to be performed to implement this process is to figure out a creative way, if needed, to break down a task and name it accordingly.

➢ Measure the unit of task for your situation so that a large task can be broken down meaningfully.

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Manage 4: Avoid Multitasking

➢ Mindset change is to understand that multitasking is counter-productive, and can make you stupid.

➢ Task that needs to be performed to implement this process is to get in the habit of switching off your devices to focus on the task at hand.

➢ Measure your average focus time to stay on a task.

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Manage 5: Prioritize Your Tasks

➢ Mindset change is to understand that at any point in time, you need to have only one #1 priority task.

➢ The #1 priority task must be worked on immediately since any #1 priority task is due right away.

➢ Measure how many times in a day or a week or a month your #1 priority changes after you have started working on them.

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Simon Fraser University

Manage 6: Schedule Communications

➢ Mindset change is to understand that your buzz takes considerable time.

➢ Start with a rough estimate, and schedule time for your communications throughout your day by blocking your calendar.

➢ Measure your baseline time for processing all your communications either on a daily or a weekly basis.

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Manage 7: Report Your Tasks Right

➢ Mindset change is to understand that a task follow up is a failure on your part.

➢ Report the tasks correctly by providing additional information of time remaining to complete the task.

➢ Measure the actual time it takes to complete the task to help in future estimation and planning.

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Lead 1: Lead Right

➢ Mindset change in understanding that a leader's role is to inspire.

➢ Provide meaning regularly in a structured way.

➢ Measure the team morale.

Lead 2: Set Priorities

➢ Mindset change in understanding that a leader is accountable for setting priorities and cannot set two #1 priorities at the same time.

➢ Communicate clearly the process of how priorities work.

➢ Measure the number of priority changes.

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Lead 3: Promote a Culture of Recognizing Great Work

➢ Mindset change in understanding that pay-for-performance does not work in the long-term, and peer-to-peer recognition is the most effective way of motivating teams.

➢ Make it a ritual to catch someone doing right, and practice that ritual daily.

➢ Measure not just who gets more recognition, but who recognizes most to promote the culture of peer-to-peer recognition

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Lead 4: Facilitate Great Work

➢ Mindset change in understanding the differences of bad work versus good work versus great work so as to figure out the quality of work being done by your team

➢ Assist your team members in choosing their task as much as possible within the constraints of the project.

➢ Measure the progress made from week to week in improvement in the percentage of great work.

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Lead 5: Eliminate Bad Meetings

➢ Mindset change in understanding the two types of meetings and why these should not be combined.

➢ Structure your meetings so that every attendee is accounted for and prepared for your meetings.

➢ Measure the time saved week to week by eliminating bad meetings, and also measure the improvement in the quality of the existing meetings.

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Transform 1: Establish a Rallying Cry

➤ Mindset change in understanding that every employee should be able to derive the correct meaning from the rallying cry.

➤ Figure out a keystone habit that can have the potential to cause a chain reaction of positive changes across the organization.

➤ Decide on the duration for the rallying cry to exist by measuring successes of other keystone habits.

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Transform 2: Align Strategic Initiatives

➢ Identify not more than 4-6 strategic initiatives.

➢ Use the SMART (*Specific, Measurable, Assignable, Realistic, Time-related*) framework to define those strategic initiatives and link the strategic initiatives to the rallying cry.

➢ Decide on the CSFs (*Critical Success Factors*), Metrics, and KPIs (*Key Performance Indicators*).

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Transform 3: Schedule Health Checkups

➢ Avoid turning these health check-ups into witch-hunts.

➢ Have a mix of successful projects to discuss so that organizational learning is engendered.

➢ No more than 2 meetings per week per person.

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Conclusion