Project Management Concepts

Obsah

Project Management Concepts

- Vision, design, strategy and execution
- https://www.amazon.com/Project-Management-Concepts-Techniques-International/dp/1466502886

Project

- **A temporary endeavor undertaken to create unique product or service**
- Temporary
- Have sponsor (stakeholders, interested parties …)
- Can include smaller project as well

Project portfolio

- A projects and programs together to facilitate strategic business objectives

Program

- A group of related project which are more useful to manage them together

Project Lifecycle

- Engineering V - from abstraction to low-end and then back
- Waterfall
- Incremental model
- Prototype

Project Governance

- Relationship between all internal and external groups involved in the project
- Approval and direction for a project
- Identified stakeholders
- Agreement on a deliverable
- Processes to manage risk, issues, scope …

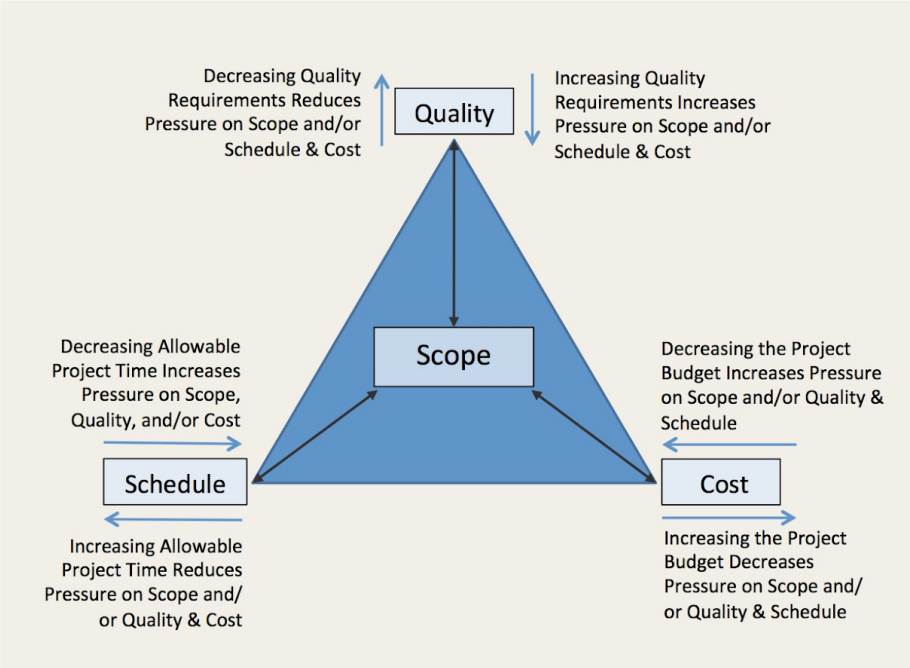
Business case

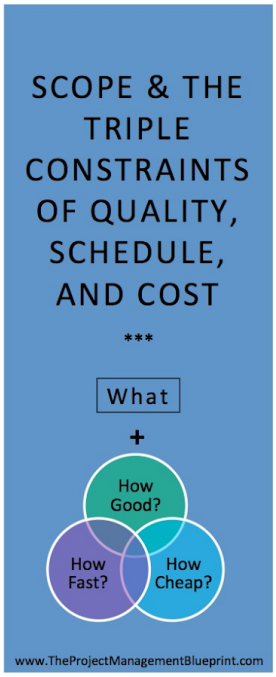
Has to include at least this:

1. The business problem
2. Details of the project's fit with organization's mission
3. Expected benefits to the organization
4. Cost/benefit analysis
5. Funding and its sources

Triple constraint

Quality <-> Scope





Project manager

SKILLS

1. Organization and managements
2. Technical
3. People and Communication
    a. Support, motivate, decide, inspire, challenge bad decision of CXO
4. Administration

. Monitor, analyze, cash flow, HR

Notes

- Be aware of micromanaging of technical stuff
- **Manages, prioritizes … according business needs**
- Open communication with sponsors
- Link between users and external providers

Knowledge area

- Time, Scope, Cost, Quality, HR, Communication, Risk, Verejne zakazky

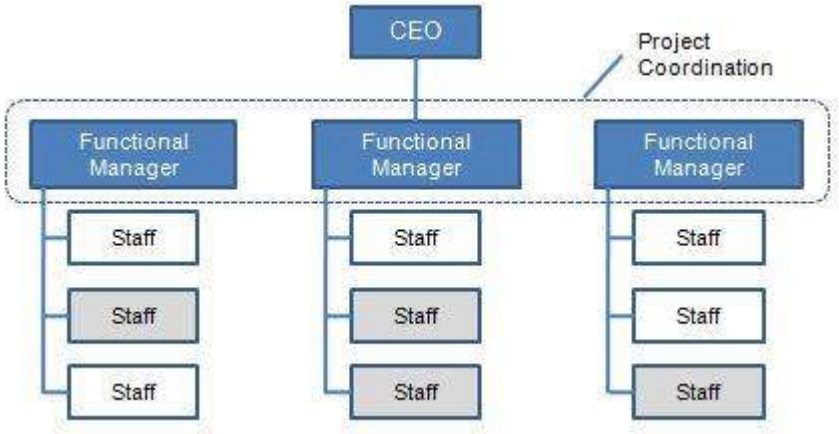
Business case -> **Proposed solution**

- Business opportunity
- Market analysis
- Assumption and constraint
- Other alternatives - we can choose already built system

- Benefit and cost
- Mitigation of risk and risk management
- **SUMMARY**

Types of Project Organizations

1. Functional - to get specialist we need to ask head of his department



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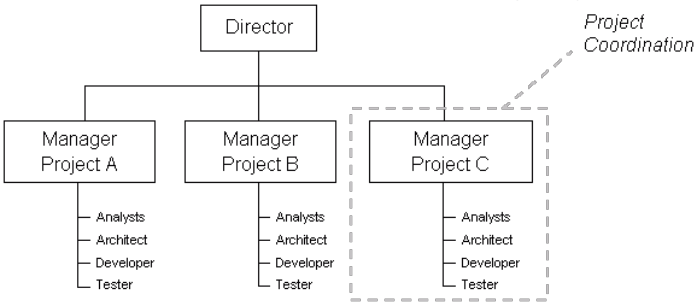
2. Project-based - bigger teams, no need to ask for help from other department, higher cost and less productive for short-lasting projects



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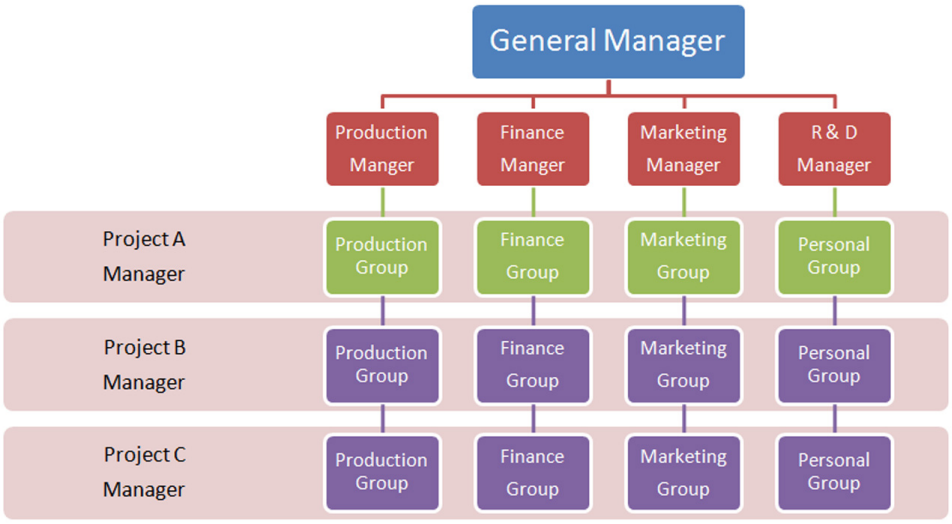
3. Matrix - sharing information, better reassign of people, more complex (assignment's conflicts)



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Choosing and prioritizing projects

- Benefit-cost ratio
  - Graph

        - Cumulative cost of ownership + operations
        - Cumulative benefits/revenue
- Internal rate of return
- Payback period
    - Break-even point in time
- Return of investment
    - ROI = (cumulative benefit - cumulative cost) / cumulative cost

Present Value - Value on a given date discounted by time and other factors (fee, risk …)

- Present value = FV / (1 + r)^n
- Where: FV = future value, r = interest rate (0.05), n = number of periods

Net present value - PV input cash flow - PV output cash flow

- $$NPV = \sum_{t=1}^{T} \frac{C_t}{(1+r)^t} - C_0$$
    - C_t = net cash inflow during the period t
    - C_0 = total initial investment costs
    - r = discount rate, and
    - t = number of time periods
- To determine if the investment does make sense after predicting cash flow and the price for that item

After choosing

- **Project charter**
    - Sign by managements and sponsor to support the project initiation stage

PROJECT CHARTER

Project Title	**Project and Portfolio Management Tool**			**Project Manager**	**Sameer Patel**
Project Start Date	**May 21, 2017**	**Project End Date**	**August 31, 2017**	**Project Sponsor**	**Randy Hadden**

Business Need

All Information Technology projects that require agreement on the Memorandum of Understanding between the Customer and the Service Provider are approved through email. This project was initiated to reduce the manual approvals and create a system to obtain and track the approvals to reduce any discrepancies and loss of data.

Project Scope	**Deliverables**
Create an in-house PPM to include all Global IT projects.	1. Generate consolidated project status report 2. Extract Global Headcount details for all projects
Risks and Issues	**Assumptions/Dependencies**
1. Data discrepancy due to large amount of projects 2. Involvement of multiple teams	1. All Global IT projects to be added to the tool 2. Managers to provide regular updates for the projects

Financials

Budget to complete this project is $3000

Milestones Schedule

Milestone	**Target Completion Date**	**Actual Date**
Upload all Global IT Projects to the tool	May 20, 2017	
Complete UAT testing for the tool	July 30,2017	

Project Team		**Approval/Review Committee**	
Project Manager	Randy Hadden	**Sponsor**	Randy Hadden
Project Manager	Sameer Patel	**Business Division Head**	Aniket Bhonsle
Team Members	Vice President, Senior Manager, Analyst	**Business Unit Head**	Sunil Rajan
		Finance Manager	Ketan Shah

- **Kick-Off meeting**
    - Discuss project vision, meeting of all parties
- **Launch project**

Project requirements

Scope management

- What to do and nothing else
- Statement, description, definition, specification, scope of work

Key documents (during conceptualization phase)

- Needs assessment
  - Record of the stakeholder needs that motivate the development of the project
- Functional requirements
  - What the product/service will perform, how well it help the operational environment
- Solution design
  - Architecture, components, modules ...

Stakeholders

- People directly/indirectly and positively/negatively affected by a project

- Analysis
  - Identify project stakeholders
  - Identify stakeholders' interests
    - Lead to document
  - Access stakeholders for importance and influence
    - For example scale from 1 to 5
  - Outline assumptions and risks
    - Communication plan (frequency, topic …)
  - Define stakeholder participation

Project planning

Output: project plan to be presented to management

- Set the environment - Organization breakdown, Scope specification, Quality plan, Life cycle
- **Estimating of project activities and durations (+ linkage between them)**

JEFF HUNTER.co

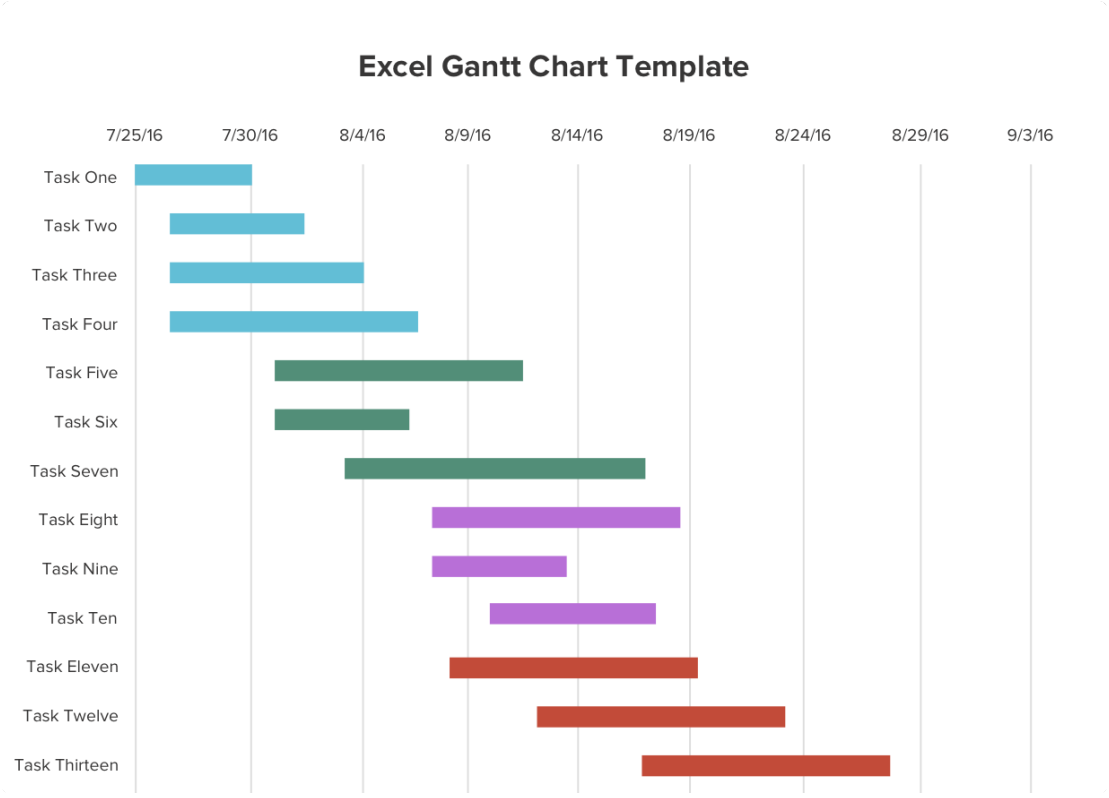
SMART Goal	Not a Smart Goal	Conclusion
Deliver the software application as described in the Requirements Document by December 4th 2015.	Project has to be delivered as per the client needs.	The SMART goal is very **specific** regarding delivery date and scope which will set up the project boundary.
The new application will reduce the time taken by each transaction by 2 minutes.	The application will increase the efficiency.	The SMART goal sets a parameter that can be **measured** unlike the non-SMART goal which is abstract.
There is a signed contract for the delivery of the application between all stakeholders and all have access to the same during the course of the project	The goals are not signed off but just discussed in meetings.	The SMART goal is clear and everyone knows and has **agreed upon** the project deliverables as there is a signed contract that people can revisit to check the scope, cost and all other details of the project. Goals set up in meetings or decisions made in meetings without documentation will be lost.
The number of critical and major bugs at the time of delivery should be 0 and there should be less than 10 minor bugs and less than 10 trivial bugs.	There should be zero bugs and issues in the application.	It is good to aim high but it is important to be **realistic** and set realistic goals
The Design Phase would be completed on April 30th The development phase will be completed on November 1st, 2015.	Project will be delivered on time	The smart goals are specific regarding **timelines** for various project phases which will help project planning and project execution unlike the non-SMART goal which is not time bound.

Work breakdown Structure

  - Tree structure
  - To certain granuality
  - Human/Material/Equipment resources
- GAP analysis
  - **Get** - get information to get from unknown to known (measure, ask ..)
  - **Assume** - assume to get information based on known data
  - **Park** - No way to make assumption so we park them to 2 field (postponed, abandoned)

Project Scheduling

Gantt chart

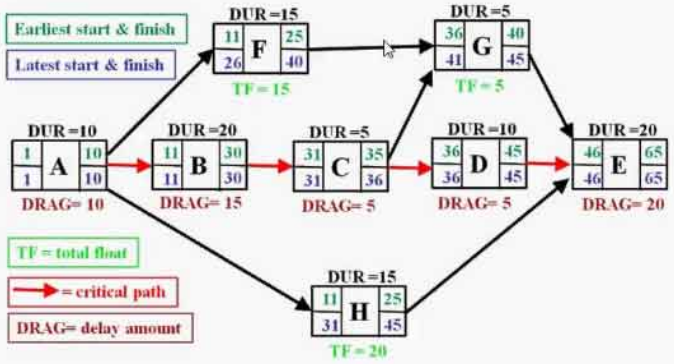


- From **Work breakdown structure**

Critical Path Method

Calculates a single deterministic early and late finish date for each activity based on specified sequential network logic and a single duration estimate

F = (ES + Duration) – 1



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  - **Earliest from the beginning**
  - **Latest from the end**

Project Initiation Documentation RACI Chart

	Project Sponsor	*Project Manager*	*Business Analyst*	*SME*	*Project Team*
Statement of purpose	RA	C	C	I	I
Project approach or methodology	I	RA	R	I	C
Project objectives	C	RA	R	C	C
Problems and opportunities	C	RA	R	C	I
Risks	C	RA	R	C	C
Assumptions and constraints	C	RA	R	C	C
High-level processes	C	C	RA	C	I
Items not in scope	C	R	RA	C	C

-
  - R (Responsible)
    - The person who does the work to complete the task or make a decision. Several people could be responsible for one task but each task should have at least one responsible person.
  - A (Accountable)
    - The person who is accountable for the correct and on-time fulfillment of the task. Ordinarily this person should sign off or approve the task. Only one person should be assigned per task.
  - C (Consulted)
    - The person who provides the information for the project before the task can be done or approved. It could be one or several people and is assignment into this group is optional.
  - I (Informed)

- The person who need to be informed about task progress. That person could be affected by the outcomes of the task and for this reason should be informed, but isn't the consultant and does not contribute to the task completion. It could be one or several people and their assignment into this group is optional.

Communication plan

Who conducts/ initiates the meeting	Stakeholders / Target audience	Purpose of communicating with each group	How will you communicate with each stakeholder group?	Frequency of communication & when they will occur
IMD Associate Director	IT Steering Committee	See IT Steering Committee Charter	Presentation/Discussion, hard copy of presentation	Quarterly
IMD Associate Director / IMD Managers	SVP-Finance	To communicate status of and issues in projects	discussion, hardcopy report	Monthly
	IMD Associate Director and IMD Managers	IMD Internal Project Status	discussion	Bi-monthly or as needed
IMD Managers	IMD Associate Director	Review	progress reports	weekly
IMD Associate Director / Managers	IMD Associates	Communicate Department issues, announcements, accomplishments	discussion	every 2 months or as needed
Project manager	Project Sponsor, Co-Project Manager	Review	discussion	Bi-monthly
Project Manager or Team Leader	Project Development Team, FTLs	Team review	group discussion	as needed
cell-content	cell-content	cell-content	cell-content	cell-content

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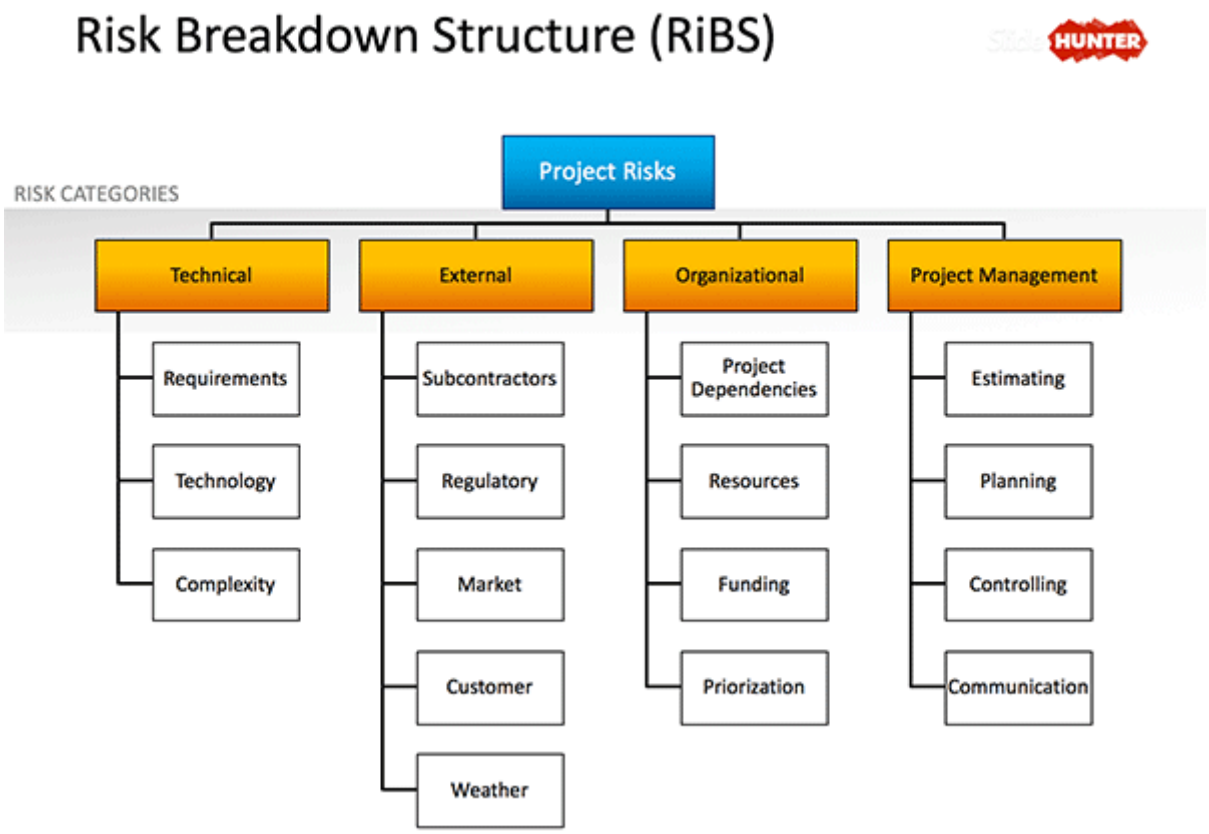
-
- + type of meeting

Risk management

- Source from technology, schedule, financial, legal …
- Focus on
  - Assumption of event
  - Event
  - Threats/impact of event
  - Cost
  - Probability



Risk register

					Risk assessment				
Lp.	The main of risks	Owner of risk	Reason/cause	Effect	Probability	Impact	Level of risk	Risk response strategy	Cost of strategy
Designing risk									
1	Lack of acceptance by Investor of design proposals	Investor	Delays in approval	Increase in costs due to the suspension of work of the design team	5-40%	50thous.-500thous.	Low	Market observation, alternative designing solutions	0
2	Delays and difficulties in obtaining opinions and permits	Investor	Delay of designing work, unknown scope of design	Disturbed designing process	5-40%	500thous.-2milions	Medium	Earlier diagnosis of the situation in local authorities offices, organization of meetings preceding designing process	50thous.
3	Conflict among designing team members	Designer office	Insufficient flow of information among team members	Disturbed designing process	0-5%	50thous.-500thous.	Low	Response of a team leader to all form of conflicts - mediation in a team	15thous.
4	Too optimistic assessment of employee workload	Designer office	Approval of unrealistic deadlines for individual work	Delay of designing work	5-40%	50thous.-500thous.	Low	Proposing for employees to work overtime or ordering of part of work to another designing team	120thous.
5	Incorrect information from investor/lack of clear guidelines	Investor	Design may be issued with duplicate error or detected error can generate timing constrains	Verification of errors will increase costs and increase time due to the development of the next revision of design	40-70%	2-5 milions	High	Application to investor for extension of time to complete a design due to additional circumstances	20thous.
6	Staff do not have sufficient knowledge about the subject of design	Designer office	Errors in design	Verification of errors will increase time due to the repeated checks of designing work	5-40%	2-5 milions	Medium	Designing team leader strengthens control over work, providing for employees consultation with an expert	65thous.
Time risk									
7	Acceptance of unrealistic deadlines in contract	Designer office	Faulty contractual provisions	Deterioration of design quality of failure to meet the deadline	40-70%	2-5 milions	High	Employment of new employees or ordering part of work to another party during a contract	105thous.
Budget risk									
8	Underestimation of design budget	Investor	Budget may not be sufficient to carry out designing tasks	Deterioration of design quality	40-70%	2-5 milions	High	Limiting scope of design to necessary minimum	40thous.

- Techniques to identify risk
  - Checklist
  - Brainstorming
  - Nominal group technique
    - Like brainstorming but write down and read one after another in a circle (not affecting other with opinion)
  - Based on similar projects
- Ranking by Paired analysis
  - Small groups of people and small groups of problem

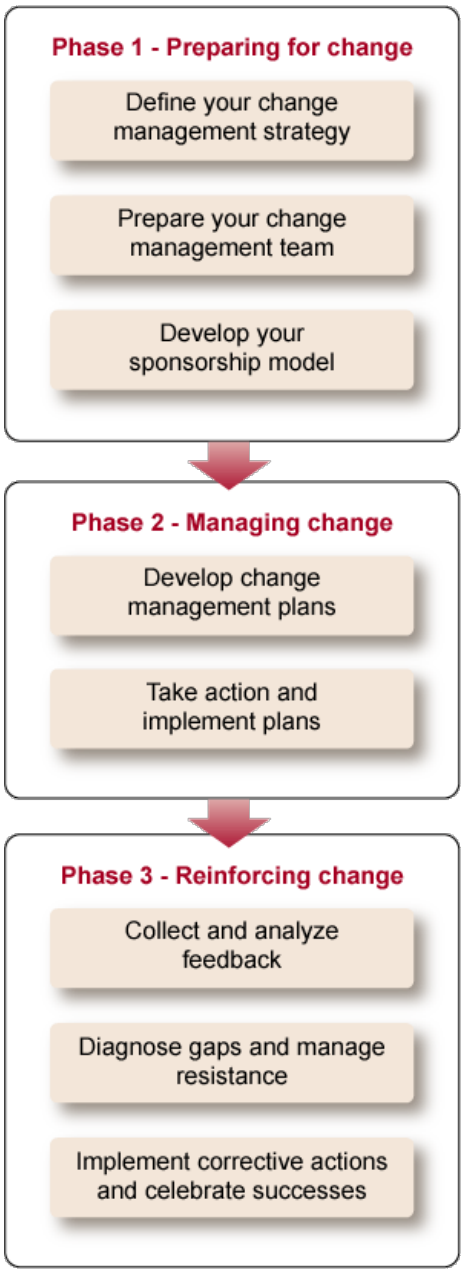
Procurement Management

- Verejna zakazka
- Make-or-buy decision (price to develop in-house in contrast with buy from other firm)

Project implementation

Start-up meeting (kick-off)

    - **Meeting Objectives**: What do we want to achieve at the end of this meeting.
    - **Project Objectives**: What do we want to achieve at the end of this project.
    - **Project Approach**: Define the main phases or components of the project, what is expected during the project, are we following a specific methodology?
    - **Deliverables**: Discuss and document what are the expected deliverables of the project so that there are no misunderstandings on what will be produced.
    - **Project Team**: You might want to create and organization chart of your project, including main stakeholders, steering committee members, subject matter experts and technical resources that will be participating in the project.
    - **Roles & Responsibilities**: It is also a good idea to define the main responsibilities of each role in the project team. This will help to set expectations from the very beginning.
    - **Change Control**: Define the process that will be used to manage change, especially scope change.
    - **Communication Plan**: Define how the project communication will be done: Status Reports, frequency of meetings, project portal, etc.
    - **Risks**: Identify the main potential project risks. This should be handled as a mini risk assessment session.
    - **High-level Requirements**: This is a very important part of the meeting, since you can collect a high-level description of each requirement, usually in a few lines per requirement. It is important to identify each requirement with an identification number or ID, and if possible with a priority indicator, like high, medium, low. I have successfully used a PowerPoint table to capture requirements during the meeting so that everybody can see them when projected on a large screen.
    - **Timeline**: Discuss a tentative timeline for the project, but be sure to let everybody know that the timeline will need to be validated once the detailed project schedule is completed.
- Focus on
    - Team recognition and reward
    - Team building activities
- Change management



- Scope, Change request, Change control, Change management, Change program
  - Record change request (document)
  - Change impact evaluation
  - Change impact proposal
  - Change request proposal
  - Change request implementation
  - Project plan update

Tracking and control

- Baseline management
    - Setting baseline criteria (should be SMART)
    - Schedule and budget
- Tracking
    - Reports
    - Stand-ups
    - Duration of tasks
    - Risks
        - Mitigate them?
        - Getting worse?
- Project reporting
    - Status, Meeting notes, progress reports, executive meetings,
    - Forecasting (planned cost)
    - Earned value reporting
        - ability to combine measurements of the project management triangle: scope, time, and costs.
        - A project plan that identifies work to be accomplished
        - A valuation of planned work, called planned value (PV) or budgeted cost of work scheduled (BCWS)
        - Pre-defined "earning rules" (also called metrics) to quantify the accomplishment of work
    - Trend analysis

Project documentation management

- **Project Schedule:** Typically, project managers use project software to manage their projects' schedules, resources, dependencies, and project costs.
- **Risk Management:** A Risk Management document is used for the purpose of capturing risks by group, category, and it allows you to rank or prioritize your risks. Risks could convert to issues and then block your project from moving forward.
- **Issues Log:** Issues could block your project from moving forward or delay your implementation date. You need to use this document to track your issues to completion.
- **Project Budget:** It is imperative to track your project budget. This document allows you to track all costs associated with your project. Project costs include resources, hardware (servers, computers, etc.), software, and vendors.
- **Communication Plan:** This is a key project document because it proactively communicates to all of your stakeholders your communication media, frequency of communication, and communication content. You do not want your stakeholders guessing about your communication strategy.
- **Project Status Report:** You need to communicate (ideally weekly) your project status to your stakeholders. You should report on progress/accomplishments, risks, issues, and next steps.
- **Project Charter:** This document captures the mutual agreement and initiation of a project. The charter contains a high level schedule, high level assumptions and constraints, and project requirements.
- **Meeting Agenda/Minutes:** Document your formal status meeting. Many organizations have existing meeting templates for you to create your meeting agenda. Meeting attendances have a tendency to be higher when invitees can verify in advance that your meeting will be productive. You should recapture the meeting discussions using your meeting minutes document because it would help to provide clarity after the meeting and/or uncover discrepancies.
- **Quality Assurance (QA) Test Plan:** Reviewing and authorizing your projects' QA document could save time and money later during your project testing phase. The QA

document contains the testing strategy, testing tools (automation), high level duration, and number of QA testers.

- **Project Management Plan:** The Project Management Institute (PMI) consolidated nine subsidiary plans (formal project artifacts), which are:

Acceptance signature

Project closeout

- Post-implementation review report
- Measure if KPI are satisfies -> take knowledge if not

PROJECT CLOSE-OUT Template

Project Title: _____ **Date Prepared:** _____ **Project Manager:** _____

Project Description:

Provide a summary-level description of the project. This information can be copied from the Project Charter.

Project Objectives	Success Criteria	How Met	Variance
Scope:			
A statement that describes the scope needed to achieve the planned benefits of the project	*The specific and measurable criteria that will determine project success*	*Provide evidence that the success criteria were met.*	*Explain any scope variances.*

- People management
  - Recognition and awards
  - Performance evaluation
  - Celebration

Lesson learned

Project XYZ Survey

Date:

Directions:
We would like your feedback on the XYZ Project.
Please select the checkbox that most closely defines how you feel about each given statement. Comments are strongly encouraged, especially if you select a "disagree" or "strongly disagree" for any statement.

#	Question	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Not Applicable
1	Project has been successful, and driven desired business results	☒	☐	☐	☐	☐	☐
Comments:							
2	Team's expectations and requirements were understood & effectively implemented	☒	☐	☐	☐	☐	☐
Comments:							
3	Project information was communicated in a timely and effective manner	☒	☐	☐	☐	☐	☐
Comments:							
4	Project execution was effective, based upon established best practices, processes, and tools	☒	☐	☐	☐	☐	☐
Comments:							
5	Overall rating for the success of the project	☒	☐	☐	☐	☐	☐
Comments:							

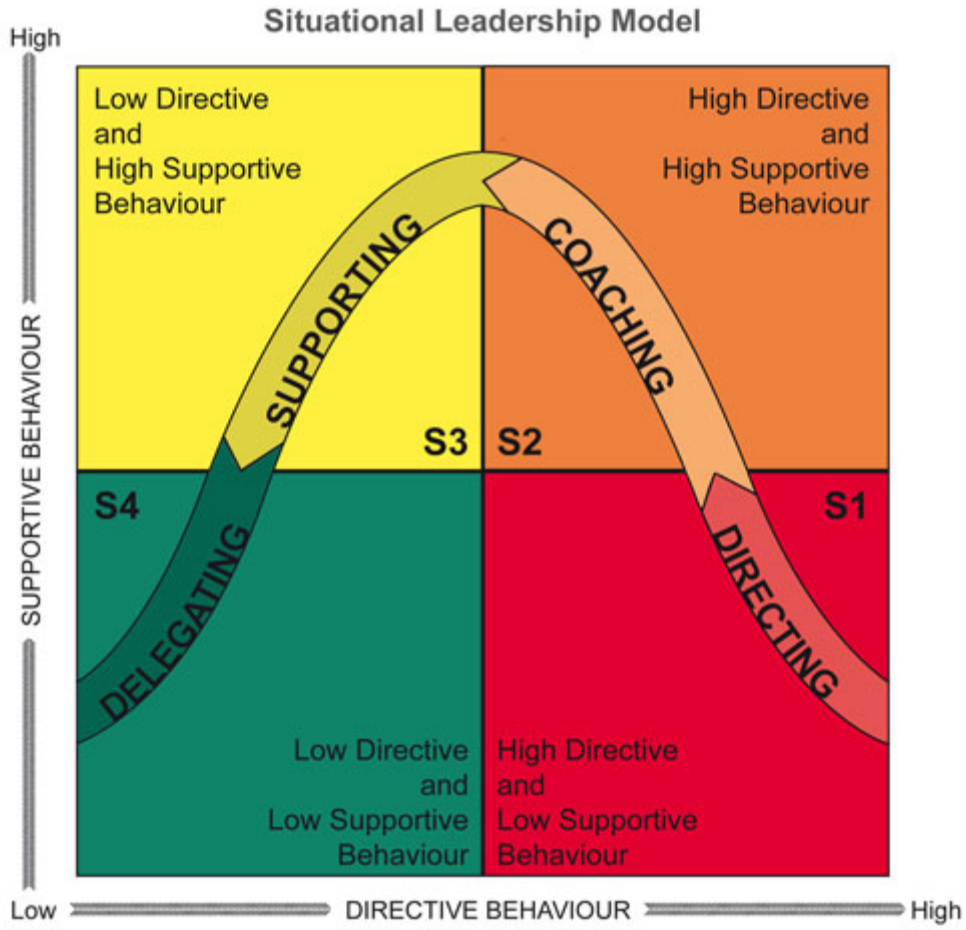
Please list any additional comments regarding this project (e.g., things done well, or areas of improvement for future projects):

Thank you for participating in this project, and thank you for your feedback!

-

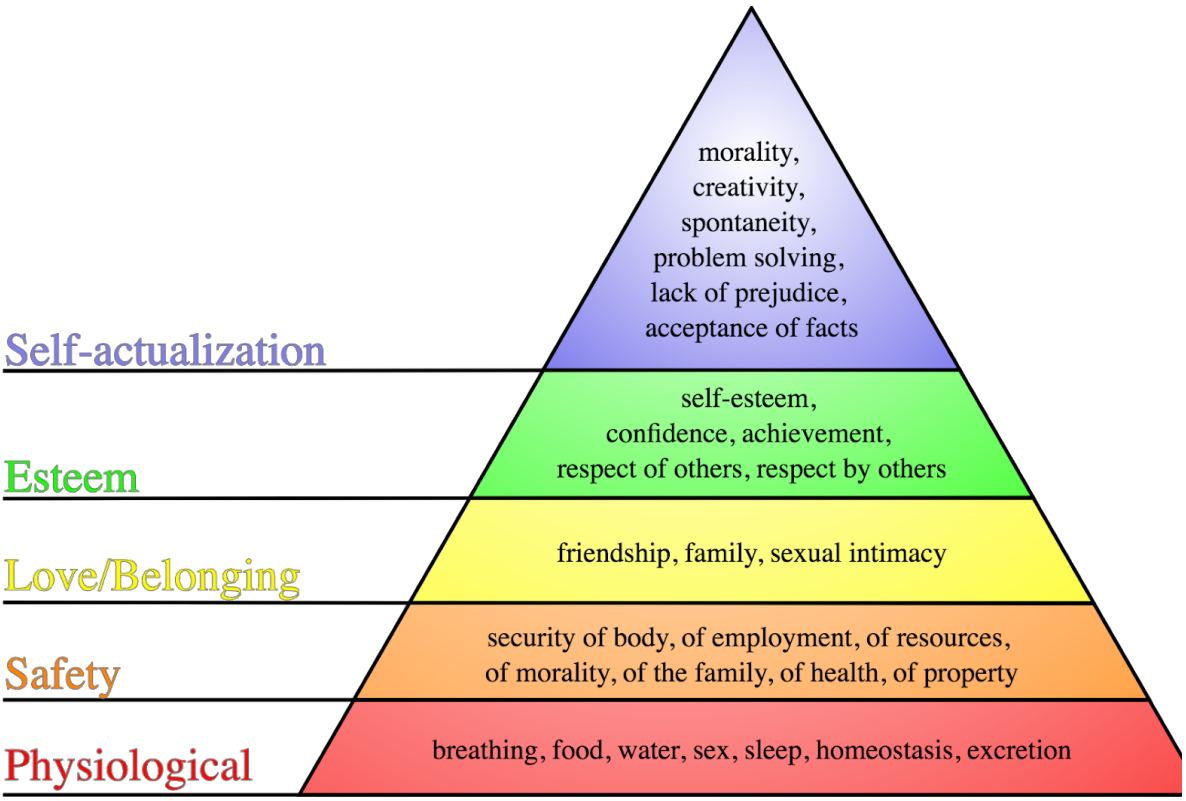
Project Leadership Skills

- Leadership
  - Do the right thing and communicate it to others
  - Setting direction
  - Inspiring and motivating
  - Aligning people
- Manager
  - Planning
  - Organizing
  - Commanding
  - Coordinating
  - Controlling
- Situational Leadership



  -
  - Transfer from S1 over S2, S3 to S4

Maslow's pyramid



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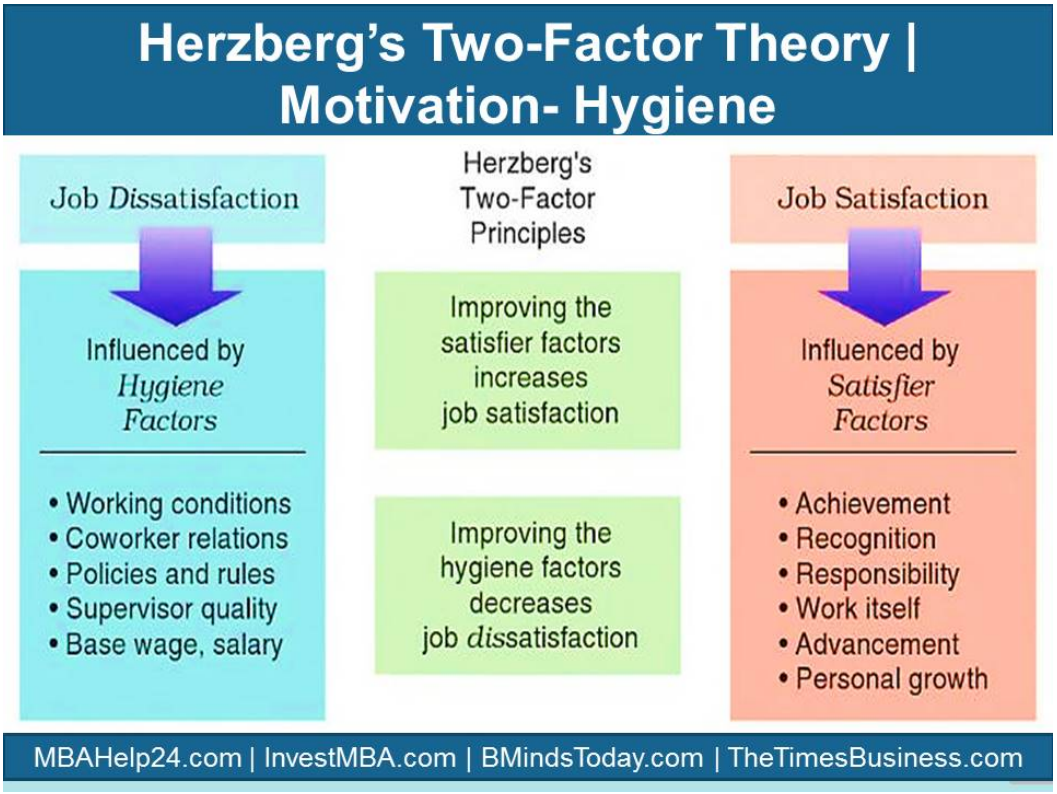
- Focus on the lower levels before the higher one
- Help other members of your team with satisfy the lower (while the lower obligatory needs are satisfied, the desired psychological needs can be reached)
  - Lack of physiological is terminal
  - Lack of safety leads to infirmity (physical or mental weakness)
  - Lack of Love/Belonging leads to loneliness and social anxieties
  - Lack of esteem leads to losing the feel of self-respect, confidence, competence …
  - Self-actualization is not the "essential" but if all lower are satisfied then it can lead to find of your personal purpose, personal growth and realization of their potentials
- PM can do:
  - Involving person in planning his own work, opportunities for growth
  - Freedom to make a decision and be recognized for them
  - Opportunities to interact with other co-workers
  - Job security
  - Rest period and adequate compensation

Herzberg Hygiene-Motivation Theory



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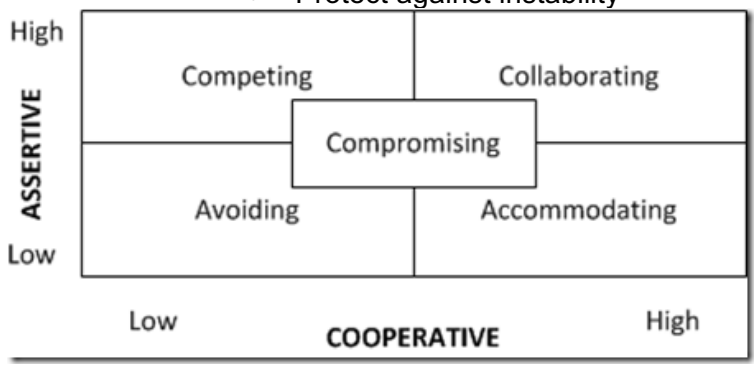
- **By focusing only on hygiene factor the workers does not become satisfied, they simply become "not dissatisfied"**
- PM can do:
  - Motivation
    - Provide learning of new skills, personal growth
    - Interesting and varied challenges
    - Provide appropriate responsibility
    - Tangible and objectively measurable results
    - Possibility to be promoted and recognized
  - Hygiene
    - Protect against inadequacy
    - Ensure effectiveness and direct supervision
    - Promote open and bilateral social interaction
    - Ensure that status is recognized (job title, private work space)
    - Provide clean and healthy physical work environment
    - Protect against instability



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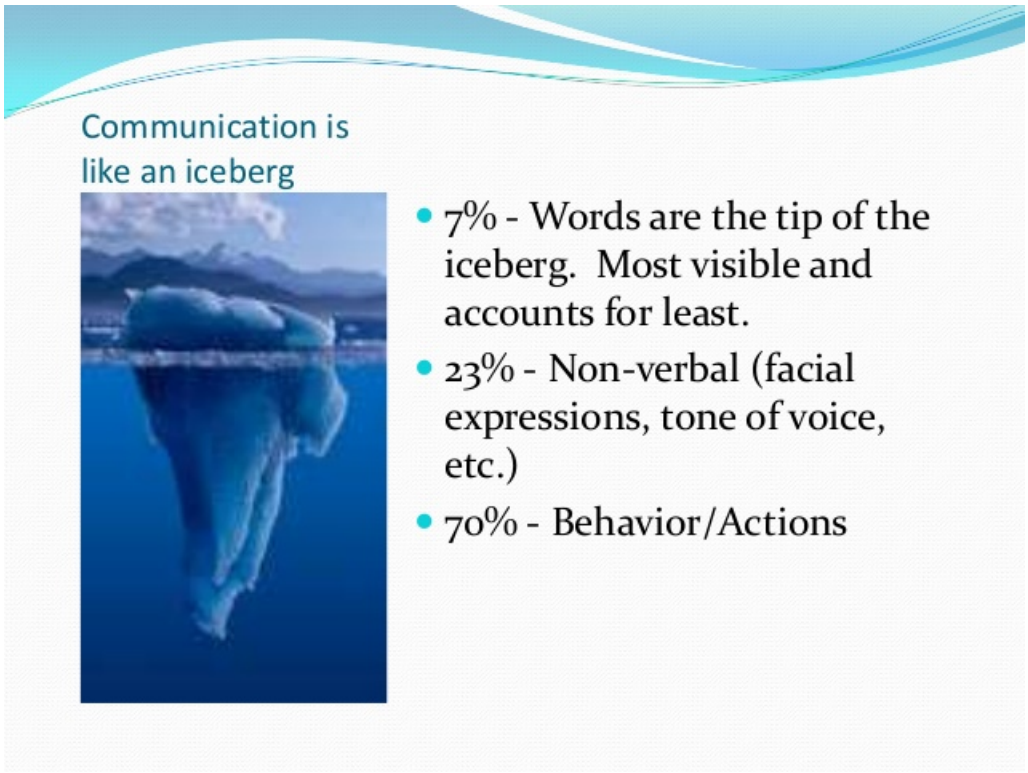
- Influence strategies
  - Give a reason
  - Friendliness

    - Consensus with others
    - Interpersonal (influence the others)
    - Directive
    - Hierarchical
- Negotiations strategies
    - Focus on the problem not the people
    - On interest not demands
    - New options
    - Fair

Body language

- 

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- **Crossed arms** might indicate that a person feels defensive, self-protective, or closed-off.

- **Standing with hands placed on the hips** can be an indication that a person is ready and in control, or it can also possibly be a sign of aggressiveness.
- **Clasping the hands** behind the back might indicate that a person is feeling bored, anxious, or even angry.
- **Rapidly tapping fingers or fidgeting** can be a sign that a person is bored, impatient, or frustrated.
- **Crossed legs** can indicate that a person is feeling closed off or in need of privacy.
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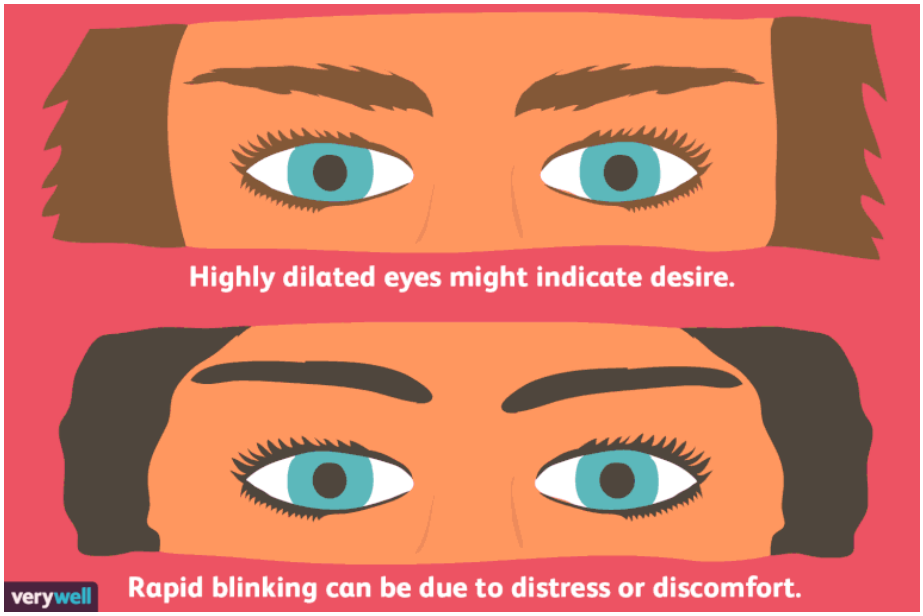
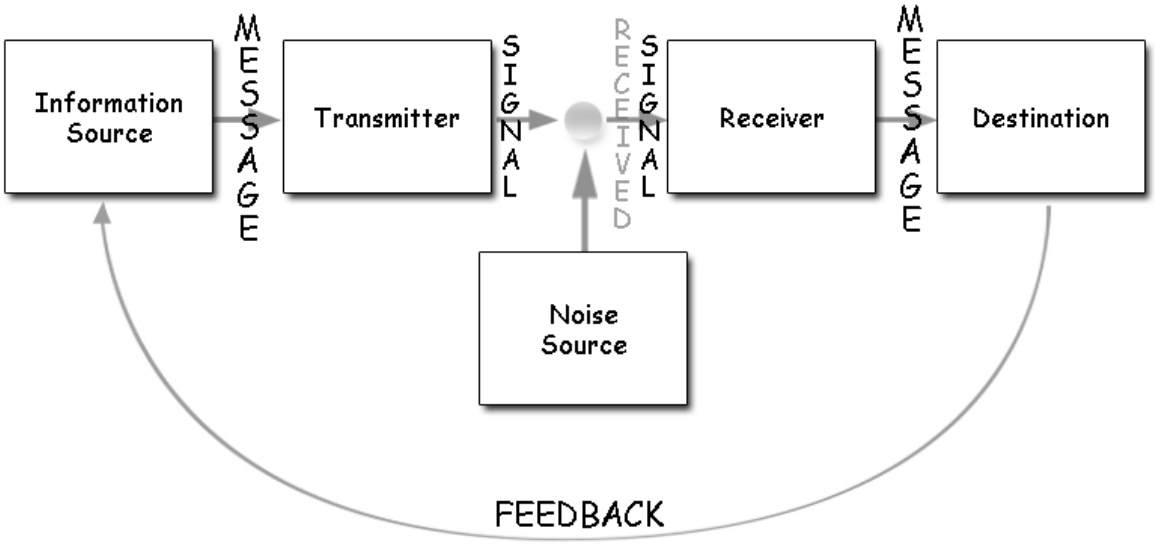


Shannon-Weaver model



Main causes of communication breakdown

- Bad communication skills
- Band intentions
- Climate of fear
- Cultural differences
- Different level of knowledge

- Lack of respect
- Lack of leadership
- Lack of trust
- Unclear agenda
- Unclear priorities
- Technical problems and misuderstanding

Miscellaneous

- http://www.sachinrekhi.com/a-lean-alternative-to-a-business-plan-documenting-your-product-market-fit-hypotheses
    - Choose true audience (not just some big market)
    - RACI model (responsibilities and decision making)
    - Also about verbal communication (ask other about their lives and stuff like that)
    - **Decision based on the audience**
        - **Are we improving/developing this feature for this audience or other one?**
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