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Successful Projects and Programs: Defining, Measuring, and Challenges

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What is Project Success Anyway?

A Presentation for the Space Congress

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25 May 2016

What is success?

- The achievement of something desired, planned, or attempted

  a. The gaining of fame or prosperity

  b. The extent of such gain

  http://www.thefreedictionary.com

- The accomplishment of an aim or purpose

  http://www.oxforddictionaries.com also, Google

What is success?

1. The fact of getting or achieving wealth, respect, or fame

2. The correct or desired result of an attempt

3. Someone or something that is successful : a person or thing that succeeds

http://www.merriam-webster.com

Success Definition: Summary

1. The achievement of something desired, planned, or attempted

2. Getting or achieving wealth, respect, or fame

▸ Isn't definition #2 an outcome of definition #1?

Or, perhaps you prefer...

▸ A simple quiet life with

- Good and happy family

- Low stress job

- Good social life

- No financial or health problems…

Characteristics of the Successful person!

Decisive – decision maker

Confident

Wise

Emotionally Intelligent

Resilient

Flexible

Networking/ people skills

Passionate

Honest

Generous

Time Manager

Curious – Adventurer

Admits mistakes

Visionary

Courageous

Adaptable

Patient

Knowledgeable

Enthusiastic

Creates Value for Others

Communicator

Listener

Success is not...

- Success is not a course you take in school

- Success is not a "science"

- Success is not dependent on a single factor

- Success (for most cases) is not a 0% or 100%

- Success is not a "gut feeling". It can be measured!

- Success is not a "copy'n paste" experience!

- Success does not come by luck or coincidence
  - Luck may bring good things, but you can't depend on it

But... Success has a key!

Discipline!

However...

- Sometimes success is a "Yes or No" if
  - You are a doctor and your "project" is the save the patient's life
  - You are trying to catch a flight or a train
  - You are an attorney and your "project" is to win the case
  - You are a candidate for a position in an election
  - You are playing the championship game

Are These People Successful?

- A football coach who won a championship but lost his family

- A movie star who ended his/her young life with a drug overdose?

- A great artist or musician who does not have friends or social life

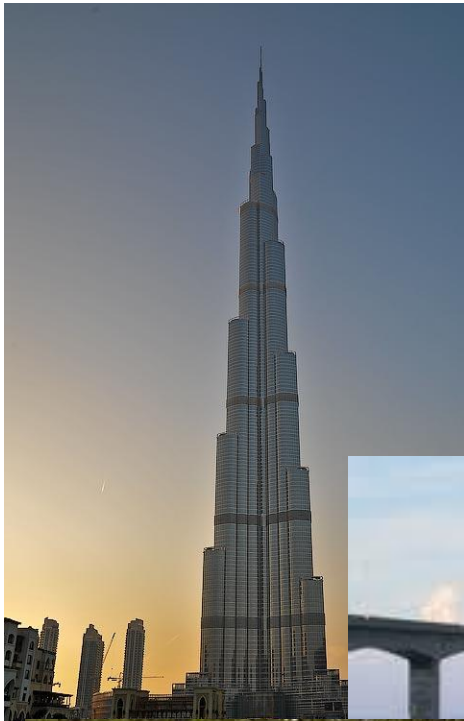- A great executive whose life ended prematurely with a heart attack

What did these people miss?

- LIFE BALANCE...
    - The success in one front, at the expense of other fronts

So, what's after success?

- Success may bring wealth and fame… but does success bring
  - Happiness?
    - To us and/or other?
  - Satisfaction?
  - Serenity?
  - Content?
- If not, we are missing something!

In Construction...

- Projects are:
  - Visible to the public
  - Take anywhere from a few months to several years to build
  - Last for decades or even centuries
  - Cost anywhere from a few thousands to multi-billion $
  - Include several parties and require many specialties
  - Subject to government regulations and restrictions
  - Industry has to keep up with technology and inventions

In Construction

- Like other industries, companies' success varies

- In bad economic times, many companies go out of business… but others stay alive!

- Is it the character of the leader, the structure of the company, or both?

- Successful organizations are managed by successful people

Successful or not?

- A hotel project
  - The owner chooses a bad location
  - But hires a great architect and a great builder
  - The project finished on time, on budget, and with no major quality or safety issues
  - The hotel looks great but does not attract customers
- Is it a successful project?

Success from Different Perspectives

- Different parties, different perspectives
  - Owner: Private or public
  - Designer
  - Contractor / subcontractor
  - General public / users of the facility
  - Other: government, environmental agencies, lending institutions, etc.
- Who gets credit for success / blame for failure?

Setting Goals

- In order to measure success, you need to set / define your goal
  - Be definitive but flexible!
  - Balance between ambition and reality
    - My "110% rule"
- Multiple goals?
  - Competing, complementing, or independent?
  - Joggling, prioritizing
  - Short-term versus long-term goals
  - Interim versus final goal

The "SPM" Strategy

1. **Set** / define your goal (objective)
   - Define constraints

2. Create a **Plan** to achieve goal
   - Estimate time, budget, and required resources
   - "Wish list" versus "Can list"

3. Periodically **Monitor** your performance
   - Analyze any variances
   - Make corrective actions whenever needed
   - Modify goal if necessary?

Construction Project Objectives?
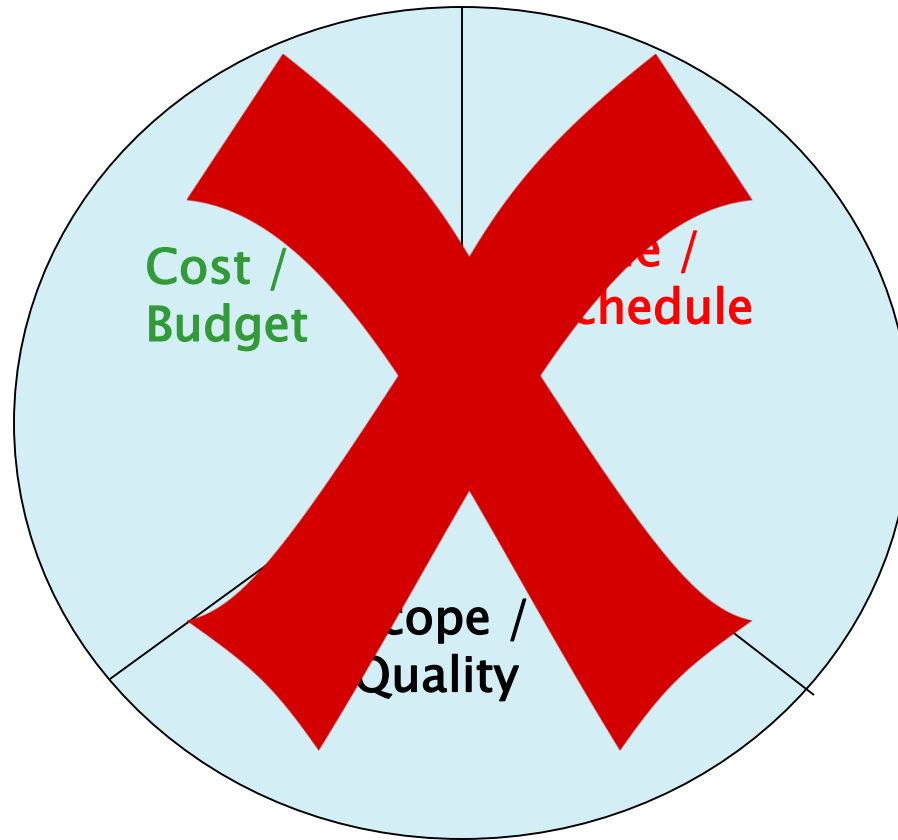
Or Project Objective, Requirements or Constraints?
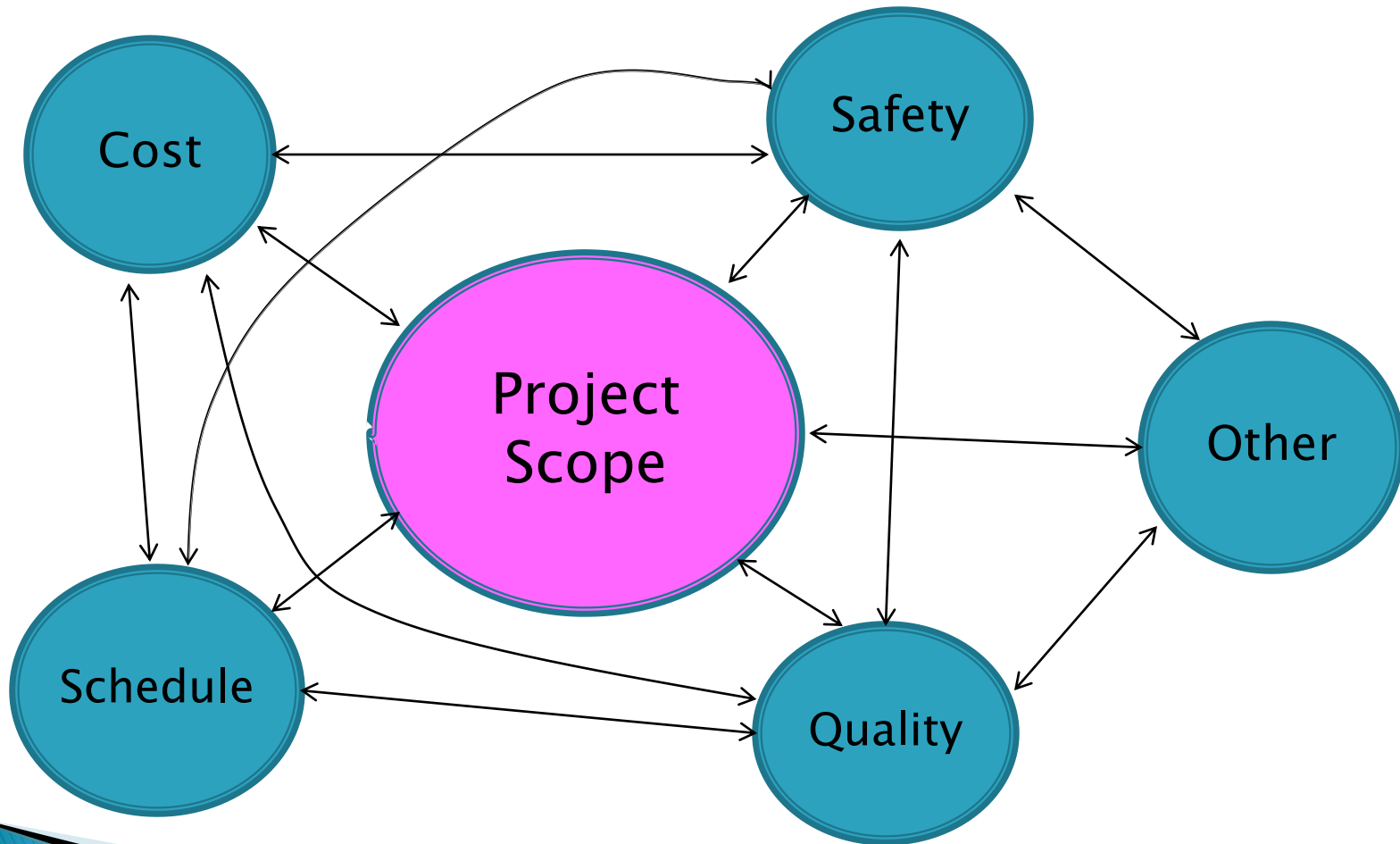
Project Objective and Constraints: Example

- Objective:
  - Build a 12-story office building with a total area of 66,000 SF within specific design specifications

- Major constraints:
  - Cost (excluding land) = $95 million
  - Schedule: Start 1/2/2017, Finish 10/31/2018
  - Quality: Conforms to design drawings and specifications (part of the contact)

Project Objective and Constraints: Example

▸ Other constraints:
  ◦ No accidents or major safety violations
  ◦ Environmentally friendly / sustainable
  ◦ No/minimum change orders (in number & amount)
  ◦ No/minimum claim disputes (in number & amount)
  ◦ No unaccounted risk / negative event occurs
  ◦ Good relationship with external parties
  ◦ Good public image
  ◦ Satisfied employees / staff / workers
  ◦ Other (e.g. create future opportunities)

Project Success

- *Achieving project objective within the defined constraints*

- *Perhaps the "perfect success" is impossible, but a "great success" is achievable!*

Success Grade Model

- A simple mathematical model, using MS Excel, to evaluate the degree of project success, based on

  1. Chosen criteria, along with their assigned weights, and

  2. Evaluation of each criterion, as objective as possible

Success Grade Model

1. Write all considered criteria of success: objective / constraints / requirements

2. Assign weight to each criteria, proportional to the importance of that criterion for this project
   ◦ Weights have to add up to 100

3. Give a grade to each criterion

4. Calculate the weighted score per criterion

5. Calculate the total score for the project

Success Measurement Model

Criteria	Weight %	Score (out of 10)	Weighted Score	Comments
Cost	35	8	28	
Schedule	25	10	25	
Safety	8	9	7.2	
Environment	4	7	2.8	
Change orders	8	6	4.8	
Claim disputes	7	8	5.6	
Relationship with other parties	5	8	4	
Public image	3	9	2.7	
Satisfied employees / workers	5	8	4	
Total	100		84.1	

Calibrating Criteria

▸ You can create a scale for almost every criteria, for example:

Cost	
Outcome	Grade
Finished on or under budget	10
Cost overrun < 1 % of budget	9
Cost overrun 1-2 % of budget	8
Cost overrun 2-3 % of budget	7
Cost overrun 3-4 % of budget	6
Cost overrun 4-5 % of budget	5
Cost overrun 5-6 % of budget	4
Cost overrun 6-7 % of budget	3
Cost overrun 7-8 % of budget	2
Cost overrun 8-9 % of budget	1
Cost overrun > 9 % of budget	0

Schedule	
Outcome	Grade
Finished on or ahead of schedule	10
Finished late 1-3 days	9
Finished late 4-6 days	8
Finished late 7-9 days	7
Finished late 10-12 days	6
Finished late 13-15 days	5
Finished late 15-17 days	4
Finished late 18-20 days	3
Finished late 21-23 days	2
Finished late 24-26 days	1
Finished late > 26 days	0

Setting Values and Thresholds

▸ Set a minimum value for project success, say 80%.

  ◦ Or you can set tiers:

≥ 85%	Project Successful
70% - 85%	Project Partially Successful
≤ 70%	Project Not Successful

▸ Setting triggers (optional)

  ◦ A trigger is a set value for an important criterion that if actual score for that criterion falls below the set value, the project is considered unsuccessful / unacceptable regardless of total score or other criteria

QUANTITATIVE ASSESSMENT OF OVERALL PROJECT PERFORMANCE

Table A15.1: Overall Rating

Criteria	Assessment	Rating (0-3)	Weights (%)	Weighted Rating
Relevance	Highly Relevant	3	20	0.60
Efficacy	Highly Efficacious	3	25	0.75
Efficiency	Efficient	2	20	0.40
Sustainability	Likely	2	25	0.50
Institutional Development	Moderate	2	10	0.20
Overall Rating				**2.45** (Successful)

Notes:
Relevance = Project objectives and outputs were relevant to strategic objectives of the Government and the ADB.
Efficacy = Project achieved its targets and objectives.
Efficiency = Project achieved objectives in an efficient manner
Sustainability = Project benefits and development impacts are sustainable
Institutional Development = Project had beneficial impacts on government policy and institutional capacity, and other positive social impacts

Asian Development Bank Project Completion Report on the Kali Gandak I "Hydroelectric Project" In Nepal April 2004

Table A15.2: Rating System

Rating Value	Relevance	Efficacy	Efficiency	Sustainability	Institutional Development
3	Highly Relevant	Highly Efficacious	Highly Efficient	Most Likely	Substantial
2	Relevant	Efficacious	Efficient	Likely	Moderate
1	Partly Relevant	Less Efficacious	Less Efficient	Less Likely	Little
0	Irrelevant	Inefficacious	Inefficient	Unlikely	Negligible

Notes: > 2.5 = Highly Successful
1.6 – 2.5 = Successful
0.6 – 1.6 = Partly Successful
< 0.6 = Unsuccessful

Mitigating / Adjusting Factors?

- Acts of God / Force Majeure
  - Events that are beyond control and expectation

- Relative measure?
  - "I did well compared to others!"
  - "I did well under the circumstances!"

- How much do these factors justify results
  - If so, can I adjust the "Project Success scale"?

Can Success be Measured in $$?

- For most projects, you can convert non-cost criteria to cost by assigning real or fictitious $$ values to them
  - After all, the company is in the business to make profit
  - Difficulty is assessing long-term cost / revenue
- For public project, perhaps the number one criteria is the welfare and satisfaction of the public

Short Versus Long Term Success

▸ You may sacrifice short-term goals for long-term ones

▸ External factors that affect weights and priorities for success:

  ◦ Current and future needs and expectations

  ◦ Prevailing economic conditions

▸ Keep the model dynamic

Too much focus on the "goal"?

It's like a fruit on a tree…

- Success has requirements and a sequence

- It takes time…

- If you pick the fruits off the tree before they are ripe, you can neither eat them, nor put them back on the tree!

- We have two choices: gradual success or immediate failure

  A. Mourou, co-founder and Vice-President of Ennahdha Party, Tunisia

- The Japanese post-WWII quality revolution

Success and Emotional Intelligence

- Emotions in the path of success:
    - Happiness / sadness, pride, greed, confidence / lack of confidence / overconfidence, selfishness, Jealousy, sympathy / empathy / apathy, frustration, helplessness, despair, anger, regret, fear,…

- Emotions can be a driver or an impediment

- Emotions versus logic: the eternal struggle!
    - But when does this become a problem?
    - How about ethics?

Success after failure?

Perseverance +	Stubbornness −
1. Logical thinking	1. Emotional thinking
2. The objective is to reach the goal	2. The objective is to prove right or spite others
3. After each failed attempt, there is analysis for cause of failure	3. After each failed attempt, there is frustration and anger
4. Next attempt is different	4. Next attempt is a copy of the previous one

"I failed 3 times in college. I applied 30 times to get a job but I was always rejected. When KFC came to China for the first time, we were 24 to apply and I was the only one dismissed. I wanted to go into the police but I was the only one not accepted. I applied 10 times to Harvard University in the US and I was rejected. "

Jack Ma, Alibaba Creator and 22nd Worlds richest man according to fortune and according to Forbes 2015 list with $29.8 billion networth.

But...

Moral of the story ... Never give up because you failed once or twice, know that failure is sometimes the universe telling you that your mission in life is somewhere else.
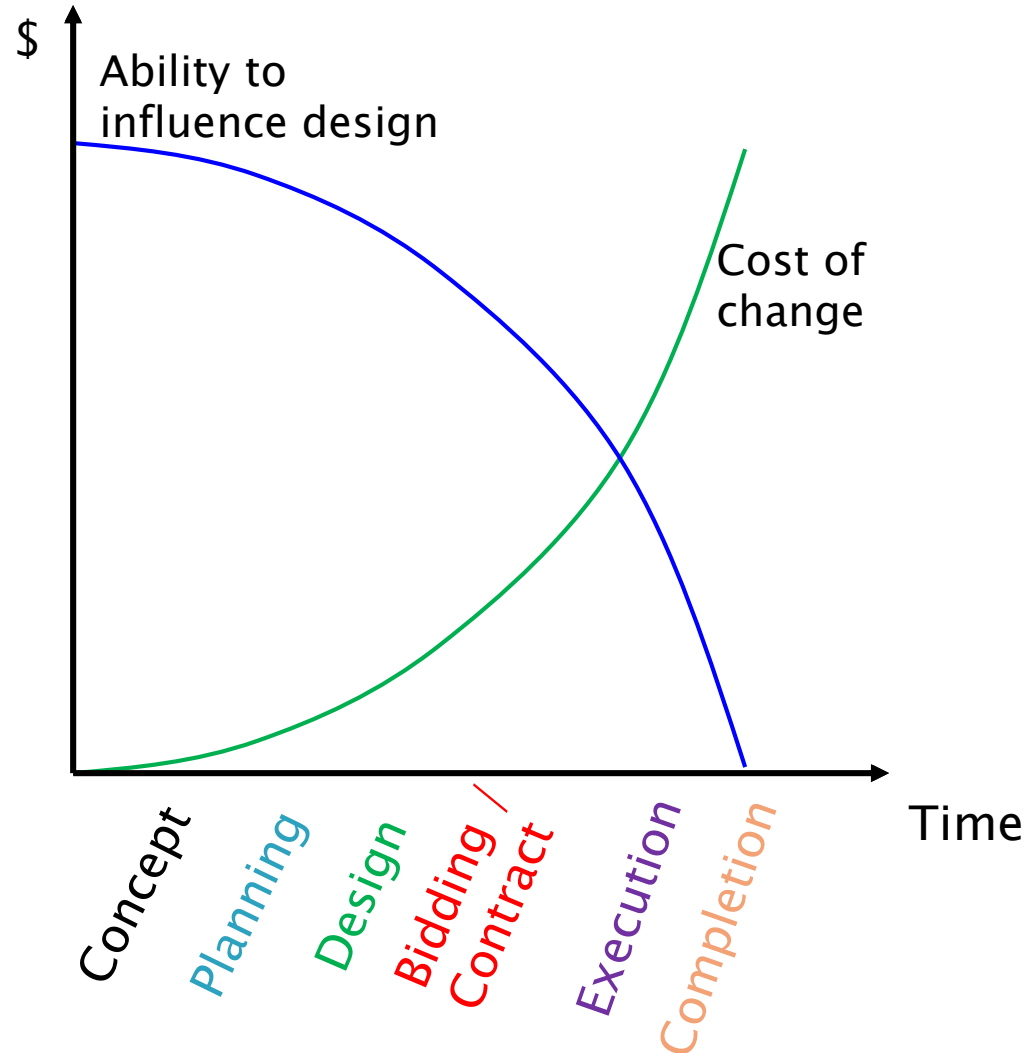
Am I Stubborn or Confident?

- What if most people around you disagree with you?

  ◦ Do you go by instinct / gut feeling or logic?

  ◦ Do you measure the results in terms of approaching the goal?

- How much do you listen to others?

  ◦ The concept of "professional democracy"

Success and Risk

- Nothing in life is zero-risk, but
    1. You must calculate your risks,
    2. Take only on "affordable" risks, and
    3. Always have Plan B, and perhaps Plan C
- Risk management is a formal process!
- Taking a risk is NOT gambling!
- Profit is a return for taking a risk, so…
    ◦ No pain… no gain!

Tips for Project Success

▸ The earlier you plan, the better you should expect the results...

$ (vertical axis)

Ability to influence design

Cost of change

Concept   Planning   Design   Bidding / Contract   Execution   Completion

Time

Tips for Project Success

▸ Importance of feasibility studies:

◦ It is more just economics

◦ Think of alternatives?

- Including not doing the project!

◦ Adjustment factors

- No two projects are the same!

◦ Think of the impact on other projects / elements

◦ Extrapolate to the future

Tips for Project Success

- Planning, planning, planning

- Project cost: There is more than the cost of land, design, and construction!

  ◦ How about value engineering?

- Rank objectives / constraints vertically, not horizontally

- Educate the owner!

  ◦ "End results" or "materials & methods"?

Tips for Project Success

- Instill the organization culture
  - No one is above the rules!
  - Everyone is dispensable and replaceable!
- Always adopt a proactive policy
  - Hope for the best and be prepared for the worst!
- The decision-making process, delegation of authority, chain of command, and communication protocol:
  - Define, inform, and enforce… but be flexible!

Tips for Project Success

- Claim Disputes
  - Read the contract!
  - Documentation!
  - Work on preventing disputes before they arise
- The "partnership" concept:
  - Create a win-win situation

General Tips…

- The Background Paradigm
  - I've been always doing it this way!
  - This is the way we do it in my country!
  - Are there "right" and "wrong" ways, or just different ways?
- Expand your "comfort zone"
- Don't be a perfectionist!
- It is okay to make a mistake, but it is NOT okay to repeat it!

Conclusion

- Any questions?

- Comments?

- Stay in touch

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