
Technical presentation skills

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“The brain starts working the moment you’re born and never stops until... you get up to speak in public.”

Anonymous

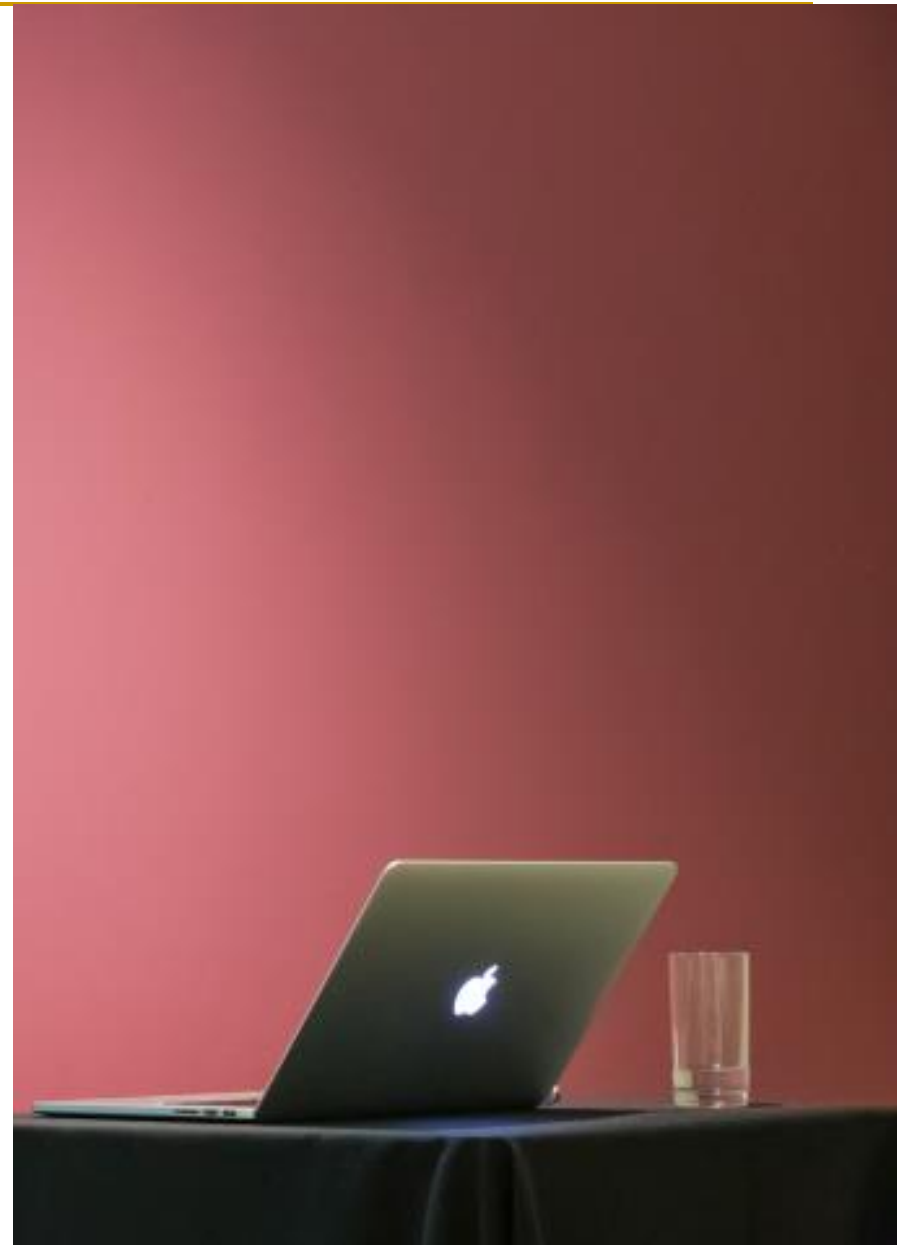
Planning



Presentation
Deck



Delivery



Presentation skills

- Good presentation skills: one of the key aspects for career success
- Presentation skills are acquired, not born with
- Extroverts are natural speakers, yet the most solid presentations are often delivered by introverts

Myth of technical presentation

- “A technical audience requires a lot of technical details”
 - What audience wants: Less is more
- “Content is everything”
 - Style + tone > 70% of the overall message impact
- “The main channel for information flow is the slide deck”
 - The speaker is always the focal point

Role model?



Why/Who/What/How

- Why do you present
- Who are the audience
- What to present to your audience
- How to plan for your presentation



Planning a presentation present

- If the topic is for your choosing, pick one that:
 - you are passionate about
 - your audience will be interested in
 - tells the audience something that they don't know

- If the topic is given to you:
 - clarify the requirements
 - add your own perspective
 - use current news, examples to enrich your story

- HKIE Membership
 - highlight how you work, not how the team/system works
 - emphasize any decision making opportunities (technical/financial/ethical...)
 - underscore your inputs, not your observations

My role as a power engineer - Brainstorm

 Job	Time	People	Equipment	Decision
Job				
Time				
People				
Equipment				
Decison				

....

- Job + Time

1. How long I have been in the role?
2. Daily work hours?/busiest seasons?/deadlines?

- Job + People

3. My colleagues/best partners/people's challenges
4. Professional characteristics for the job (reliable/organized/ethical/positive attitude/emotional control/communication skills)
5. Training/benefit/perks

- Job + Equipment

6. Description of equipment/system/plant layout/safety
7. Job function: maintenance/operation..

- Job + Decision

8. Daily decisions I have to make
9. My career plan

- **Part 1 - Introduction**

1. How long I have been in the role?
4. My professional characteristics (reliable/organized/ethical/positive attitude/emotional control/communication)

- **Part 2 - My role**

7. Job function: maintenance/operation..
6. Description of equipment/system/plant layout/safety

- **Part 3 – Challenges/satisfaction**

8. Daily decisions I have to make
2. Busiest seasons?/deadlines?
3. My colleagues/best partners
5. Training/benefit/perks

- **Part 4 - conclusion**

9. My career plan

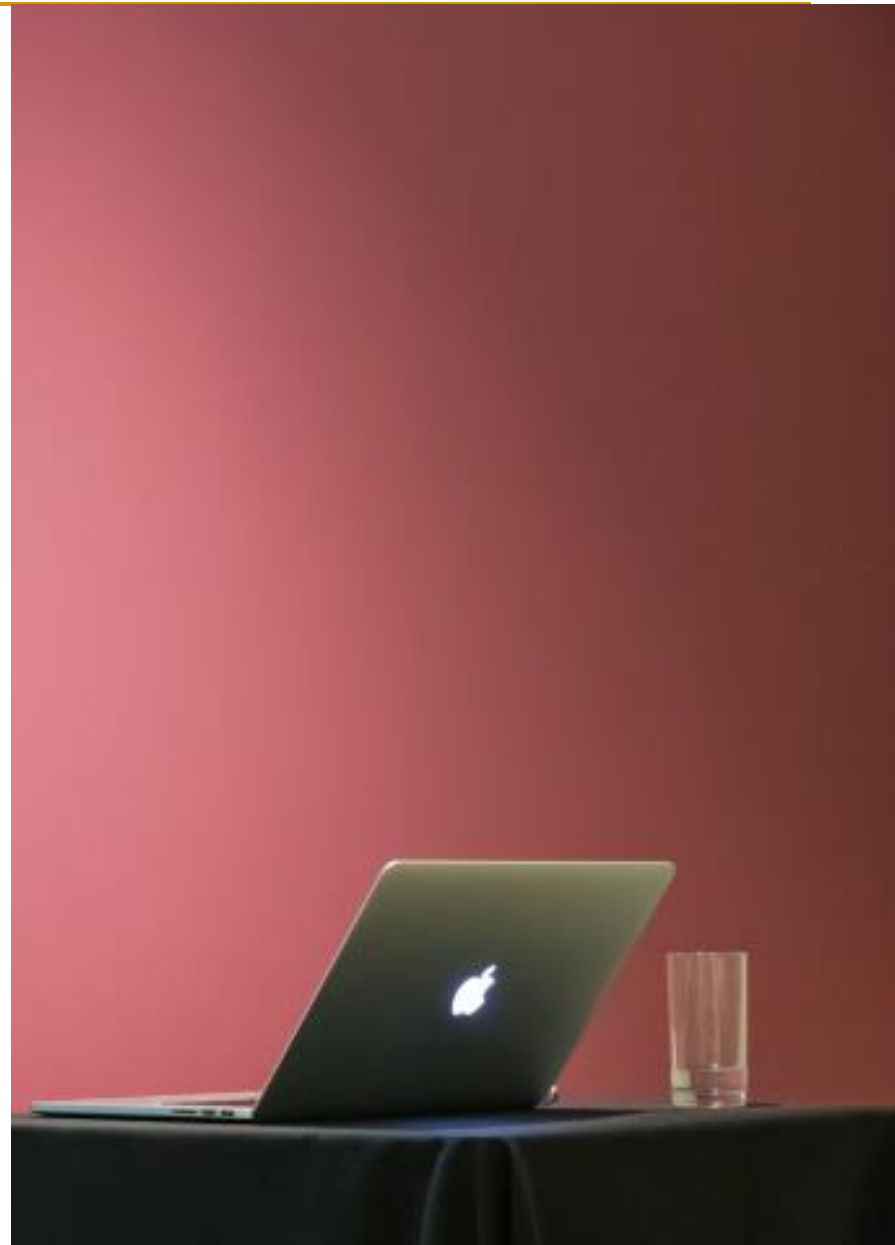
Planning



Presentation Deck



Delivery



Formulas for Speech/Presentation Organization

- **OIBCC** – Basic Formula
 - **O**pening – grab attention
 - **I**ntroduction – “Why bring this topic up?”
 - **B**ody – bulk of the presentation
 - **C**onclusion – summarize briefly points
 - **C**lose – something to remember/think about

Harvard School Formula

- **PREPY**
 - **P**oint of View – “Smoking is bad”
 - **R**easons – “cancer/money/bad influence”
 - **E**xamples/Evidence – “x people will die from smoking related deceases by the time I finish my presentation ”
 - **P**oint of view restated – “If you want a good life, give up smoking”
 - **“You”** oriented – “Take the first step now, throw away the cigarette pack in your packet on your way out”



https://www.youtube.com/watch?v=GqyEGhmNoZk&ab_channel=HuatenGlobal

马云/中国金融四十人论坛
Source (Sina, 2020)

Viewpoint (填補“人有我有”的心態很有問題)2:16 – 3:24

一直以來我們有一些思維上的慣性，比如總覺得要為了跟國際接軌，必須要做歐美發達國家有，而我們沒有的所謂空白，要填補國內的空白。把填補國內空白當作追求的目標。

我一直覺得在今天的形勢下，填補空白這句話是有問題的

Evidence (要填補未來，不是國內空白)

不是因為歐美的就是先進的，就是我們要去填補的。其實今天我們不應該刻意或者一味的要和哪個東西接軌，適應哪國的標準，填補哪個空白，今天我們要思考的是如何和未來接軌，怎麼適應未來的標準，怎麼彌補未來的空白，我們要想明白未來是如何的，以及自己到底要做什麼，然后再去看看別人怎麼做，

Key Point (否則會錯失未來)

如果永遠重復別人的語言，討論別人設定的主題，我們不但會迷失現在，更會錯失未來。

马云/中国金融四十人论坛
Source (Sina, 2020)

Viewpoint (對創新的監管出了問題) 9:09 – 9:58

今天我們的監管確實很難。

Evidence (監管能力追不上創新)

今天我們的監管確實很難。創新來自市場，來自基層，來自年輕人，對監管的挑戰越來越大。其實監和管是兩件事，監是看著你發展，關注你發展，管是有問題的時候才去管，但是我們現在管的能力很強，監的能力不夠，

Key Point (舊方法不行)

好的創新不怕監管，但是怕昨天的方式去監管，我們不能用管理火車站的辦法來管機場，不能用昨天的辦法來管未來

马云/中国金融四十人论坛
Source (Sina, 2020)

Viewpoint (銀行已經落後) 13:20 – 15:32

今天的銀行延續的還是當舖思想…踩踩踩…抵押的當舖思想，是不可能支持未來30年世界發展對金融的需求的。(當年是很先進的 vs 現在很落後)

Evidence (用大數據替代熟人)

我們必須用借助今天的技術能力，用大數據為基礎的信用體系來取代當舖思想，這個信用體系不是建立在IT基礎上，不是建立在熟人社會的基礎上，必須是建立在大數據的基礎上，才能真正讓信用等於財富。

Key Point (否則飯都有得開)

其實要飯的，也必須有信用，沒有信用，連飯都要不到。

马云/中国金融四十人论坛
Source (Sina, 2020)

Function of presentation deck

Slide deck ≠ key channel for delivering information

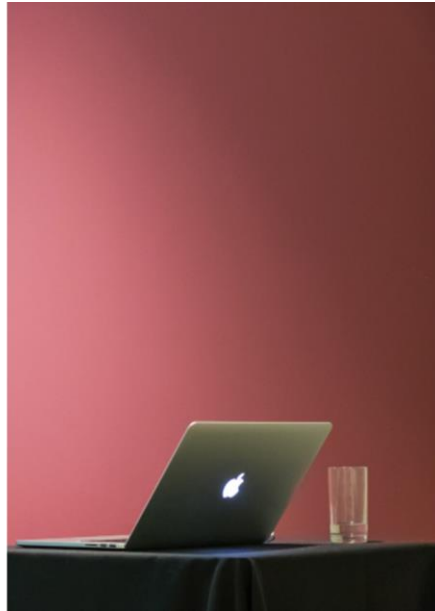
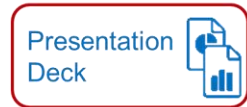
- Only for clarifying/dramatizing your messages
- Practise your key points without relying on the slides
- Visuals assist you in:
 - Pace of the presentation
 - Flow of the information
- Introduce the topic area of the next slide before you flip



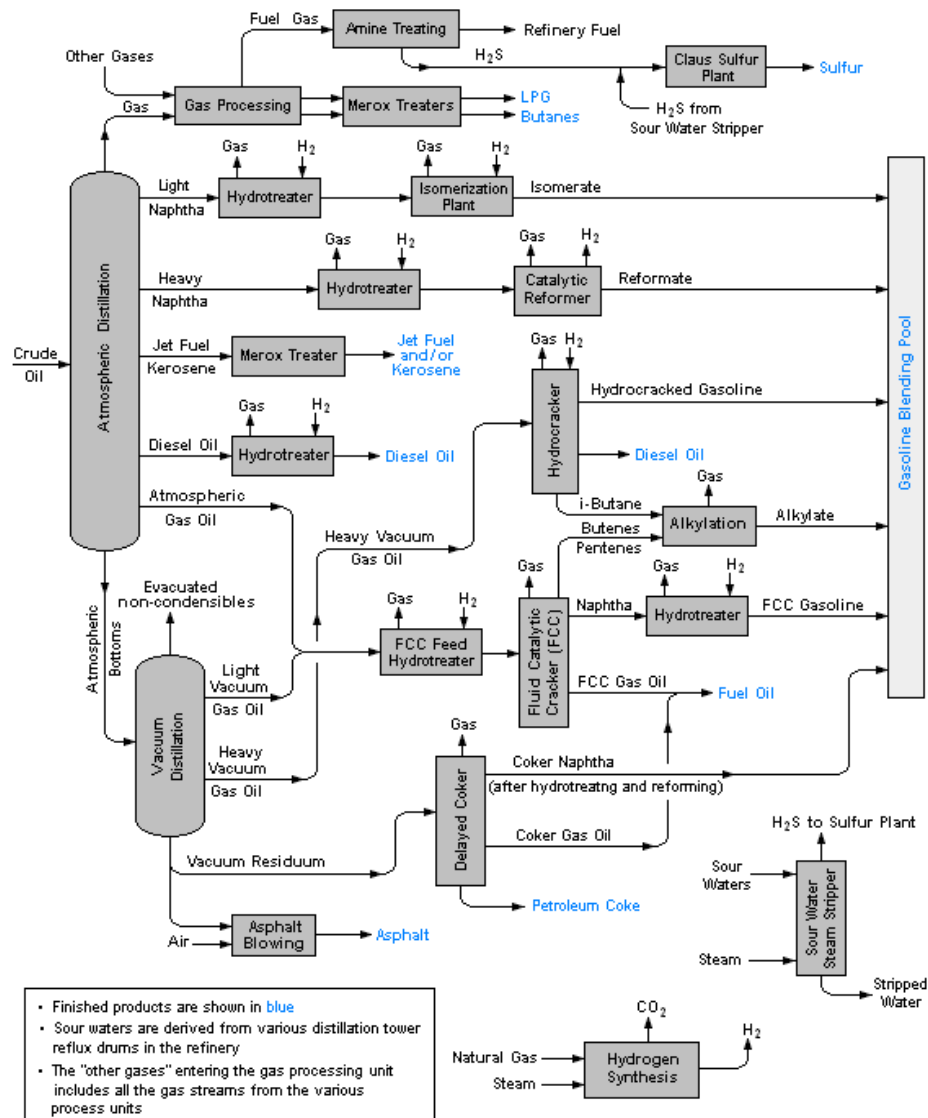
1,000

Slide layout

- Slide deck ≠ reading deck
- Each slide should be self-contained
- Clear, simple, **NO** animation/3-D/emojis (unless there is a reason for)
- No more than 3 - 5 key points



- **Planning for your presentation**
 - Myth of presentation
 - What to present
 - Who are the audience
 - Role model
 - Idea generating techniques
 -
- **Building your presentation deck**
 -
 -
 -
- **Techniques for delivering your presentation**

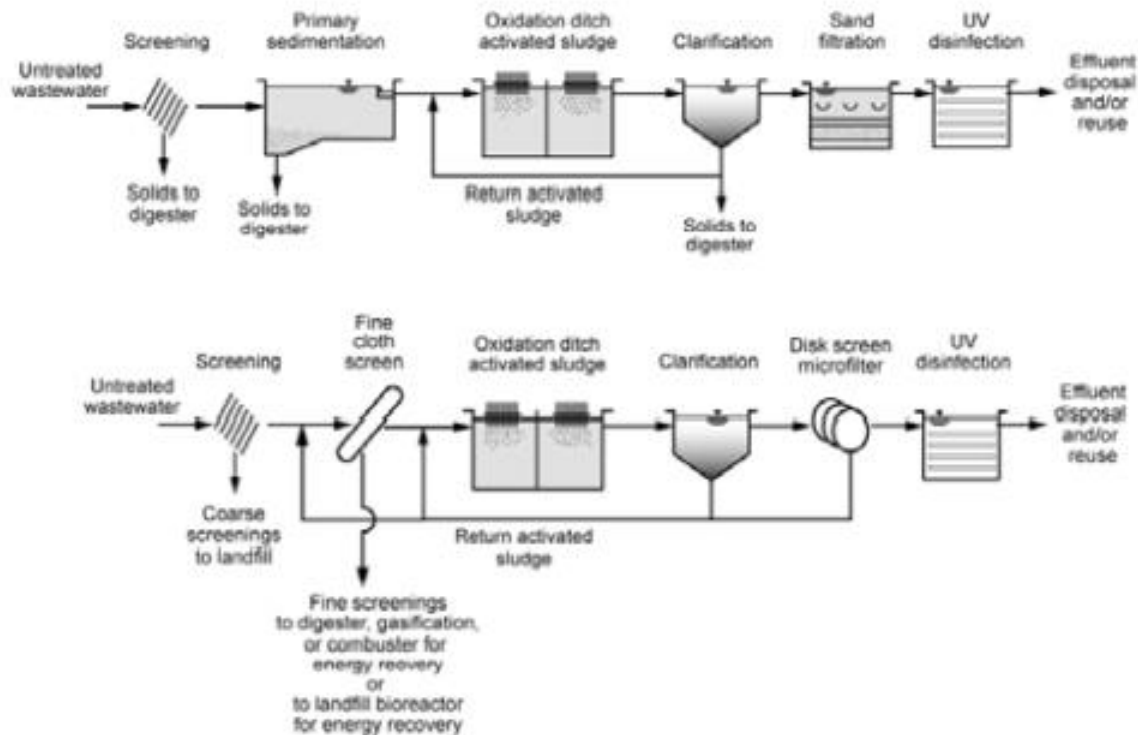


- Finished products are shown in blue
- Sour waters are derived from various distillation tower reflux drums in the refinery
- The "other gases" entering the gas processing unit includes all the gas streams from the various process units

Source: GEORGE TCHOBANOGLIOUS and HAROLD LEVERENZ

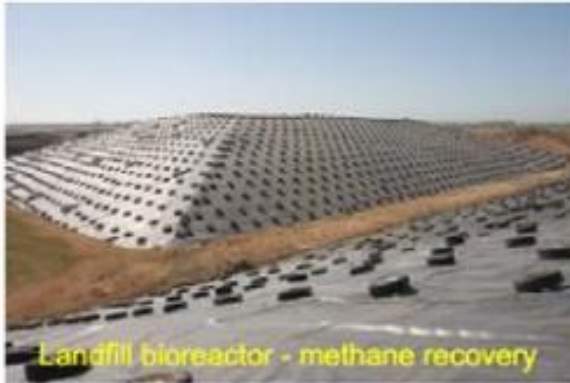
Use font size that is clear

Wastewater Treatment Process Flow Diagrams Without and With Influent and Effluent Screens



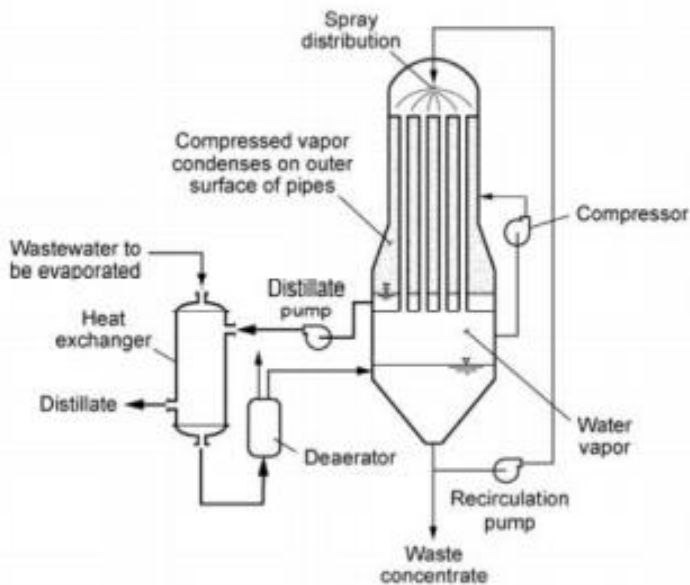
Source: GEORGE TCHOBANOGLOUS and HAROLD LEVERENZ

Landfill Developments for Energy and Capacity Recovery and Control of the Release of Methane



Source: GEORGE TCHOBANOGLOUS and HAROLD LEVERENZ

Brine Management: Concentration with Falling-Film Evaporator



Source: GEORGE TCHOBANOGLOUS and HAROLD LEVERENZ

The training

Challenges for Distributed Systems

1. Provide for the protection of public health and the environment
2. Overcome the stigma associated with past poor performance of onsite systems
3. Play a vital role in water resources management and sustainability
4. Allow for the implementation of new concepts for wastewater management (e.g. different uses of soil, not conventional treatment)
5. Help to create a paradigm shift from effluent disposal to water reuse

Challenges for Distributed Systems

1. Protect public health and the environment
2. Poor past performance
3. Water resources management and sustainability
4. Implement new concepts
5. Effluent disposal versus water reuse

Source: GEORGE TCHOBANOGLIOUS and HAROLD LEVERENZ

Use parallel sentences

“My job responsibilities include the following:

- Site safety monitoring
- Organize monthly interdepartmental meeting
- Preparing progress reports for the management”

My job responsibilities include:

- **monitoring** site safety,
- **organizing** monthly interdepartmental meeting
- **preparing** progress reports for the management.

Use parallel sentences

“The plan is deficient because:

- the budget was not prepared
- Staffing not approved
- other errors”

The plan is deficient because:

- the budget **was not** prepared
- staffing **was not** approved
- other errors **were made**

Future tense

Chinese speakers tend to use future tense excessively

- a. Be responsible for (管理處會處理一般投訴....)
- b. Be able to (愛斯基摩人會建冰屋...)
- c. Plan to (在2021年政府會...)
- d. Lead to (延遲醫治會加重病情..)
- e. Is true in general (冰塊會溶掉)

Presenting data

Put numbers into perspective

- 35% of people thought “million,” “billion,” and “trillion” are equally spaced on a number line
- Many people treat 980 million and 2 billion as nearly identical
- “Americans own almost 300 million firearms...” = about 1 firearm for every person in the United States.” (Time)
- “120 billion pieces of disposable plastic cutlery each year” = “about 120 pieces each per person each year”

Rules of writing numbers – common mistakes

“The tunnel cost the company four [?] dollars to build.” (million/millions)

Million. No ‘s’ when an exact number is given.

“The coal yard has 20 [?] tones of storage capacity.” (million/millions)

Million. No ‘s’ when an exact number is given.

“The new team head is an thirty [?] old.” (year/years)

Year. Thirty-year-old is an adjective.

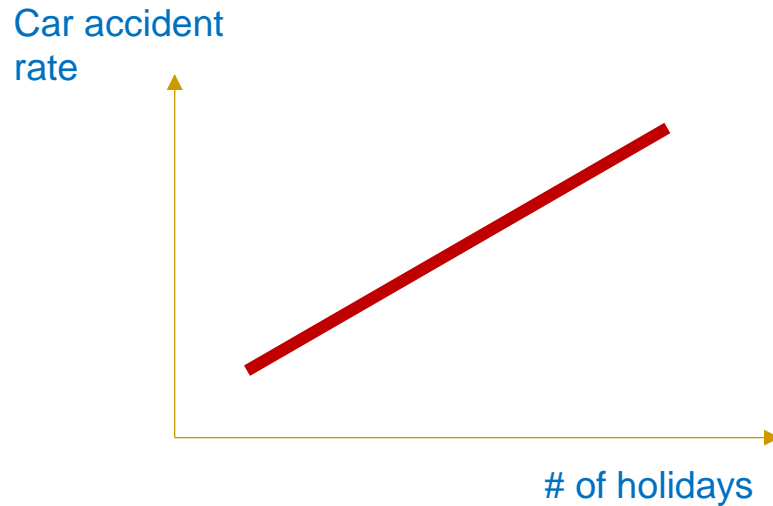
“Three hundred million dollars [?] budgeted for the construction of a new airport runway.” (is/are)

Is. A sum of money is singular.

Sharing too much data

	A	B	G	H	I	J	K	L	M	N	O	P	Q
1	Income Statement												
2	Year			3	4	5	6	7	8	9	10	11	12
3													
4	Revenues			500.0	625.0	781.3	976.6	1,171.9	1,347.7	1,482.4	1,630.7	1,712.2	1,797.8
5	COGS			240.0	300.0	375.0	468.8	574.2	660.4	726.4	815.3	856.1	898.9
6	SG&A			75.0	93.8	117.2	146.5	175.8	202.1	222.4	244.6	256.8	269.7
7	Operating Expenses			315.0	393.8	492.2	615.2	750.0	862.5	948.8	1,059.9	1,112.9	1,168.6
8	Depreciation Expense			54.5	79.5	89.5	99.5	109.5	116.8	124.0	131.3	138.5	145.8
9	EBIT			130.5	151.8	199.6	261.8	312.4	368.4	409.7	439.5	460.8	483.5
10	Interest Income			1.9	2.3	2.5	1.3	0.7	0.7	1.3	1.2	1.4	1.7
11	Interest Expense			15.4	13.5	22.9	22.9	22.9	22.9	22.9	22.9	22.9	22.9
12	EBT			117.0	140.6	179.2	240.3	290.2	346.2	388.1	417.8	439.3	462.3
13	Income Taxes			35.1	42.2	53.8	72.1	87.1	103.9	116.4	125.4	131.8	138.7
14	Net Income			81.9	98.4	125.4	168.2	203.1	242.3	271.7	292.5	307.5	323.6
15													
16	Shares Outstanding (thousand)			71.50	91.50	91.50	91.50	91.50	91.50	91.50	91.50	91.50	91.50
17	EPS			0.90	1.08	1.37	1.84	2.22	2.65	2.97	3.20	3.36	3.54
18													
19	Balance Sheet												
20	Year			3	4	5	6	7	8	9	10	11	12
21													
22	Cash Balance			116.7	124.4	65.5	35.1	33.2	65.2	61.8	68.2	86.7	113.9
23	Account Receivables		49.3	61.6	77.1	96.3	120.4	144.5	166.1	182.8	201.0	211.1	221.6
24	Gross PPE			1,090.0	1,590.0	1,790.0	1,990.0	2,190.0	2,335.0	2,480.0	2,625.0	2,770.0	2,915.0
25	Accumulated Depreciation			159.0	238.5	328.0	427.5	537.0	653.8	777.8	909.0	1,047.5	1,193.3
26	Net PPE			931.0	1,351.5	1,462.0	1,562.5	1,653.0	1,681.3	1,702.3	1,716.0	1,722.5	1,721.8
27	Total Assets			1,109.3	1,553.0	1,623.8	1,718.0	1,830.6	1,912.6	1,946.8	1,985.2	2,020.3	2,057.3
28													
29	Account Payables		19.1	25.9	32.4	40.5	50.6	61.6	70.9	78.0	87.1	91.5	96.0
30	Debt			269.5	457.5	457.5	457.5	457.5	457.5	457.5	457.5	457.5	457.5
31	Common Stocks			715.0	915.0	915.0	915.0	915.0	915.0	915.0	915.0	915.0	915.0
32	Retained Earnings			98.9	148.1	210.8	294.9	396.5	469.2	496.4	525.6	556.4	588.7
33	Total Liabilities and Capital			1,109.3	1,553.0	1,623.8	1,718.0	1,830.6	1,912.6	1,946.8	1,985.2	2,020.3	2,057.3
34				-	-	-	-	-	-	-	-	-	-
35	Cash Flow Statement												
36	Year			3	4	5	6	7	8	9	10	11	12
37													
38	Net Income			81.9	98.4	125.4	168.2	203.1	242.3	271.7	292.5	307.5	323.6
39	Add: Depreciation			54.5	79.5	89.5	99.5	109.5	116.8	124.0	131.3	138.5	145.8
40	Less: Change in Working Capital			5.5	8.9	11.2	14.0	13.0	12.4	9.5	9.1	5.7	6.0
41	Cash Flow from Operating Activit:			130.9	169.0	203.8	253.7	299.6	346.7	386.1	414.6	440.3	463.4

Presenting data



“We have observed that the number of holidays drives the rate of car accident.”

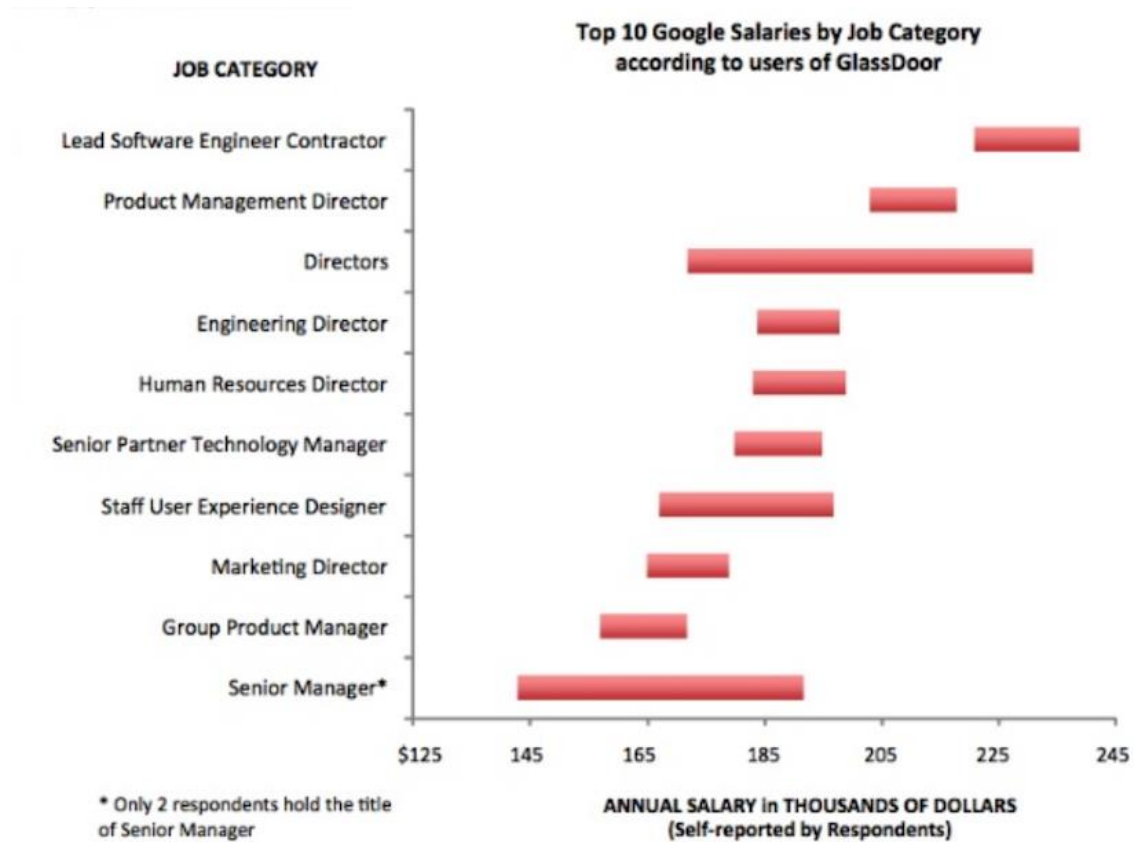
Confusing correlation with causation.

Presenting data



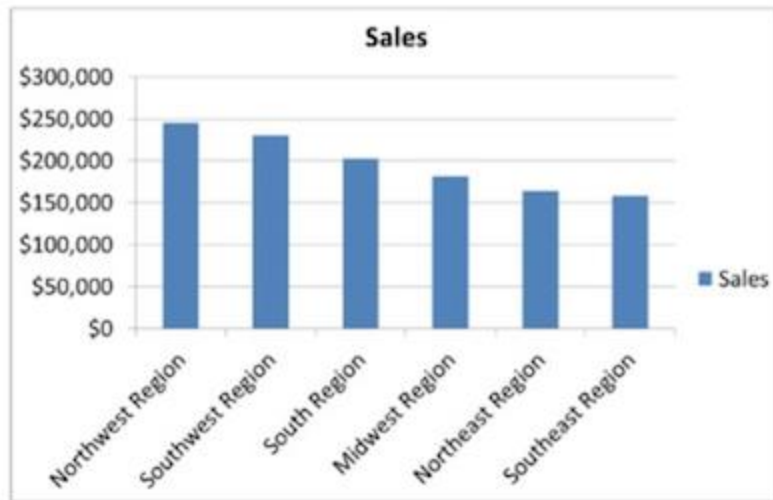
Source: jobvine.co.za

Presenting data



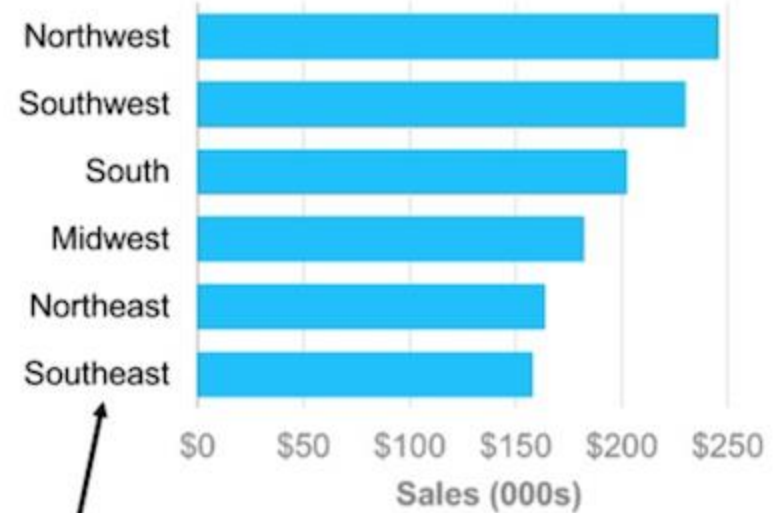
Source: junkcharts.com

Presenting data



Remove borders

Horizontal is easier to read



Condense axes

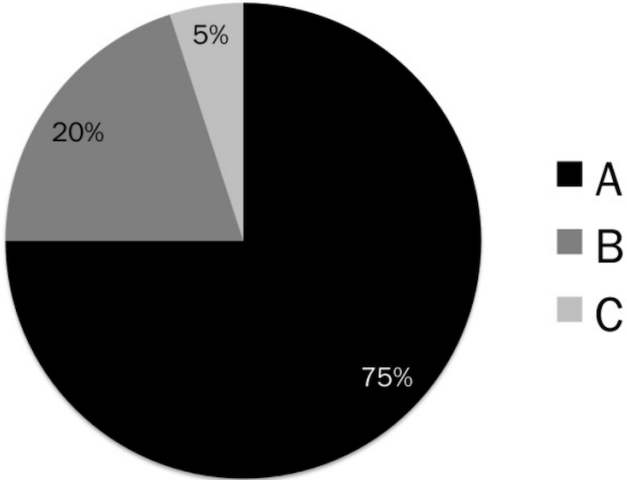
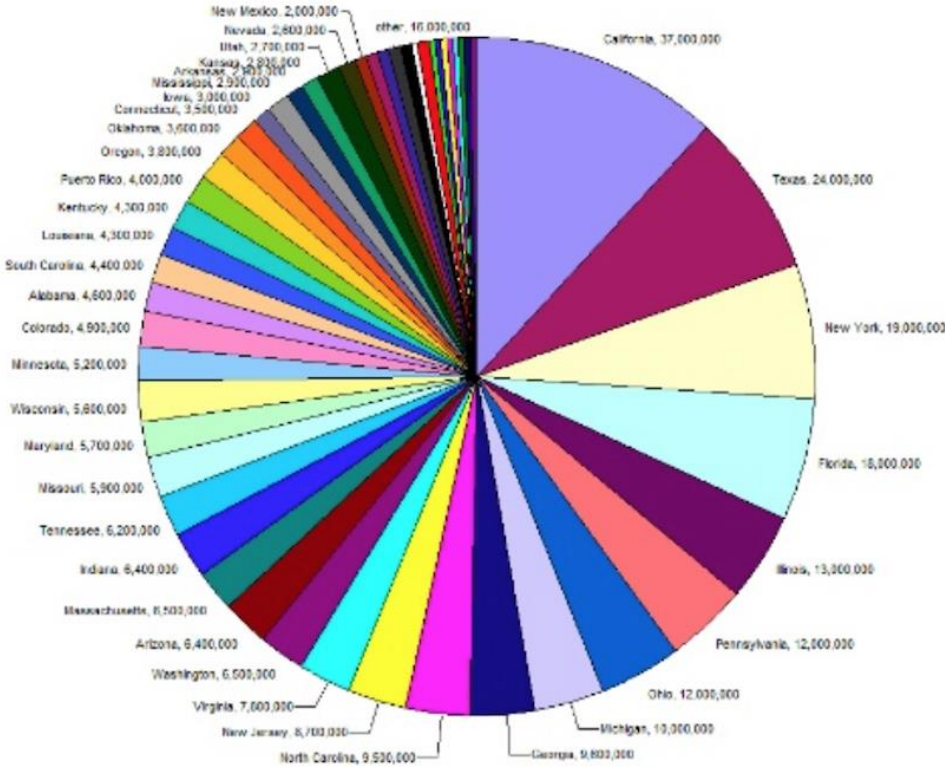
Source: Michele Kiss

Unnecessary #-D



Source: Michele Kiss

Pie-chart



Source: Michele Kiss

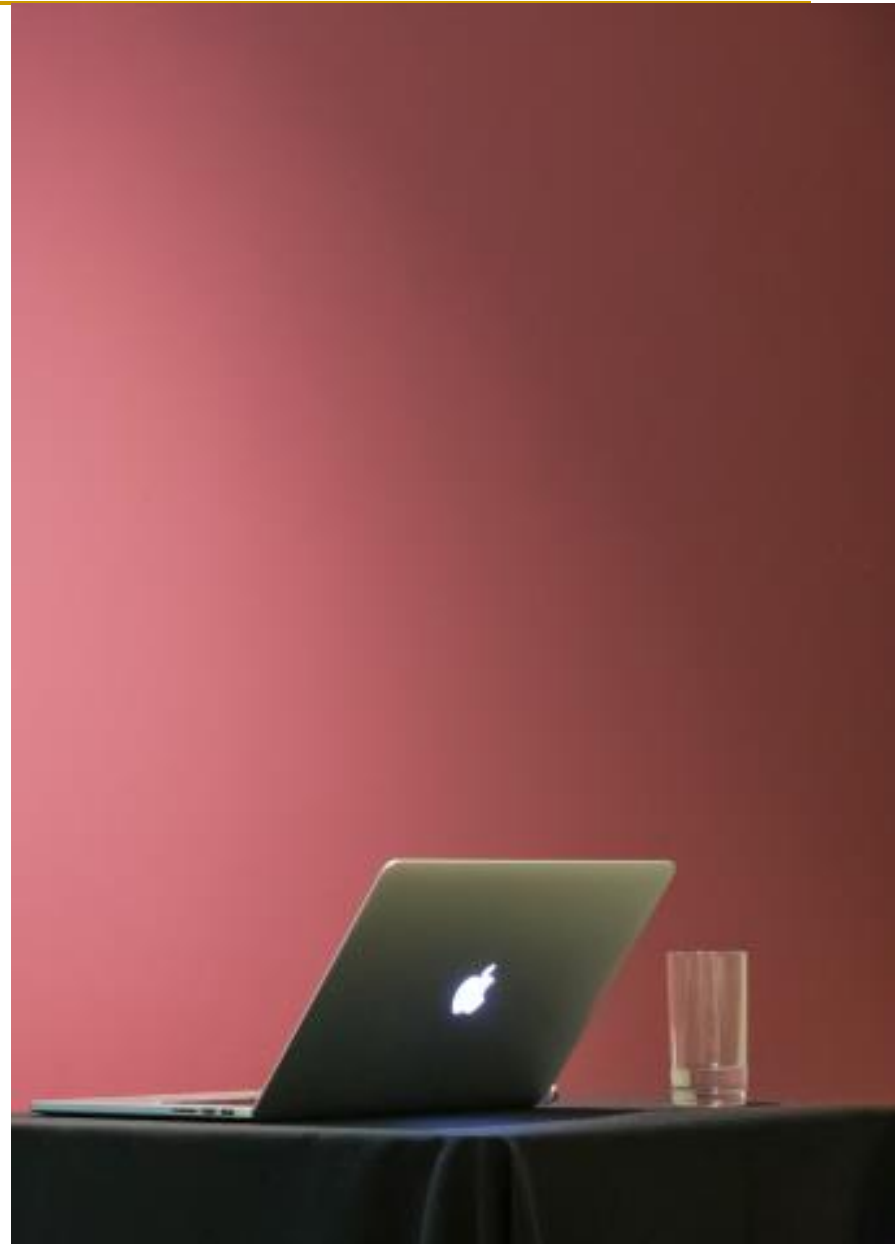
Planning



Presentation
Deck



Delivery



Opening

You presentation starts when the first audience appears in the room...

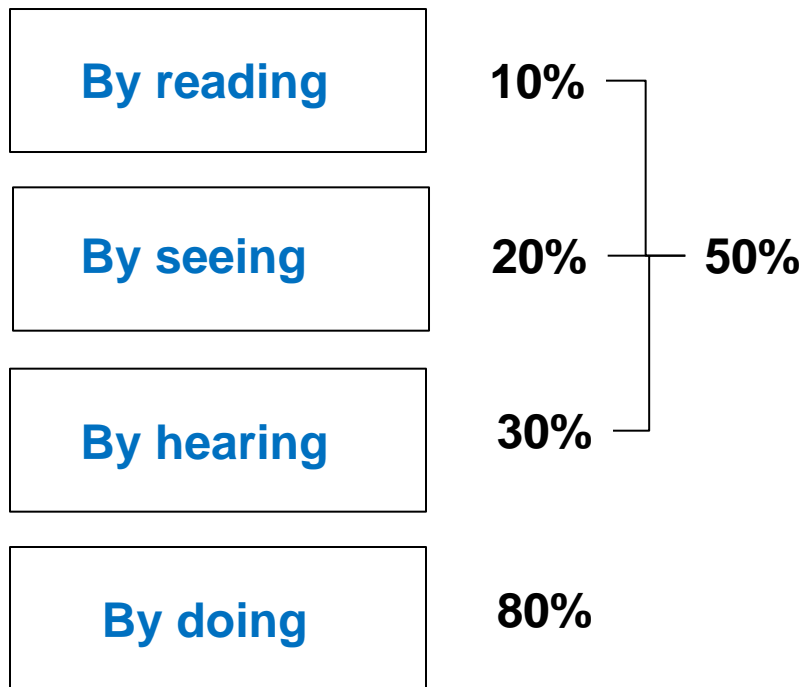


Who are the audience

- Don't assume that your audience:
 - ❑ arrives on time
 - ❑ wants to listen to you
 - ❑ is technical
 - ❑ wants more, not less information
 - ❑ can connect the first part and the second part of presentation
 - ❑ will go home and remember the content of your presentation

The audience

People acquire/retain knowledge by:



Oral presentation

Openings to avoid:

- “Sorry for being under-prepared, I was only told about the presentation a week ago...”
- “Thank you for your time, this isn’t going to take very long...”
- Read out an opening from your notes...
- Hey! Hello

Opening - typical

“Hello, everyone. It is my pleasure to be here today.

My name is _____, and I am going to be speaking to you today about _____.

To begin, my agenda today include the follow points, they _____ ”



What if/ Surprising statistic

“What if the world is doomed and we can leave ONLY one sentence to the future generations to reboot technology, what will it be?”



What if/ Surprising statistic

“Look to your left. Now look to your right. On average, one of your two seatmates will develop cancer in his/her lifetime”



What if/ Surprising statistic

“It is estimated that 99% of all the species that have ever lived on Earth are now extinct”

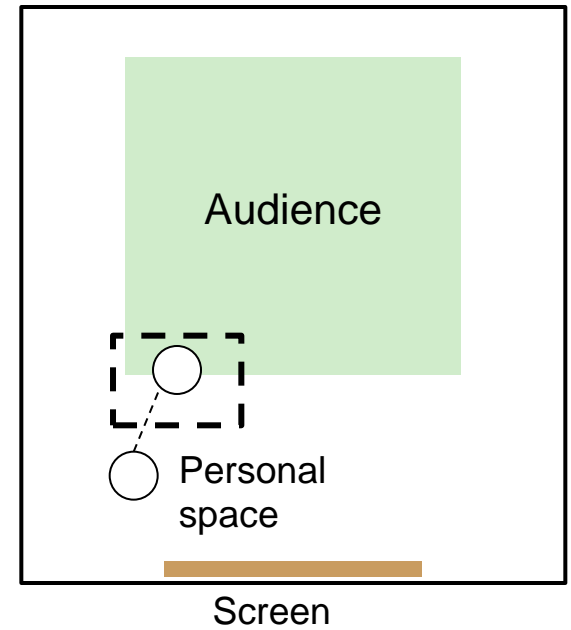
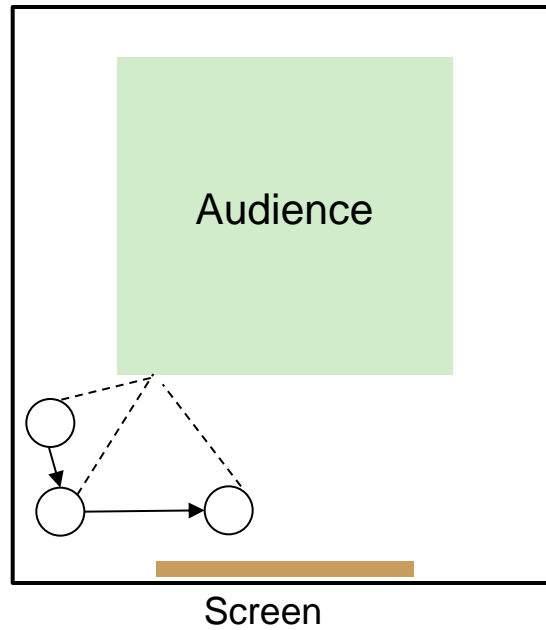
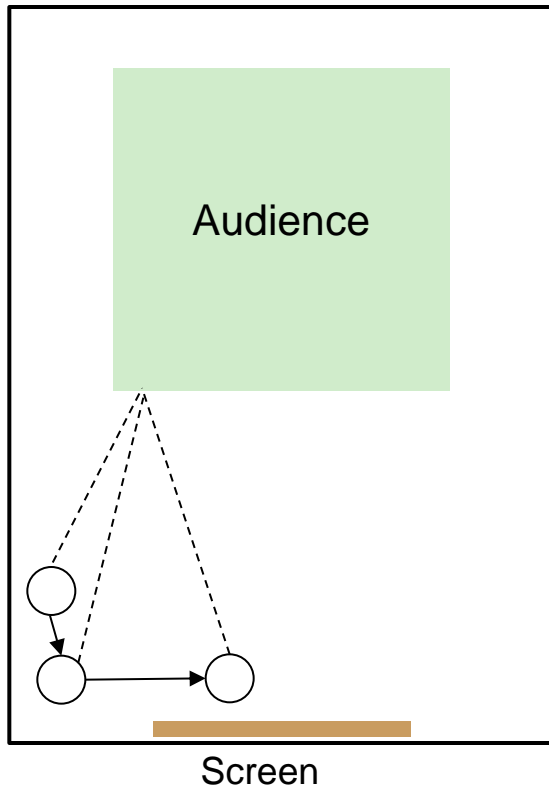


What if/ Surprising statistic

“120billion pieces of disposable plastic cutlery are discarded in India alone
....each year”



Pacing in the room



Gesture

- Eye contact
- Smile
- Natural stand
- Appropriate hand gesture



Gestures



Use gestures for :

- Weight
- Shape
- Direction
- Importance
- Comparison...

To avoid..



Bad body language

1. Don't fumble with a pencil, watch, or ring
2. Don't use um, ah, so, you know, well, right?
3. Don't feel awkward with silence (5 seconds)
4. Don't try to use a "professional voice". Use a clear voice
5. Don't read from your slides
6. Don't pay more attention to the screen than to your audience

Q&A

Thank you
for the question

- ❑ Nod as you listen
- ❑ Compliment the question

Reframe the
question

- ❑ Frame the question such that everyone can understand
- ❑ Strip out the part that is an opinion

Answer the
question

- ❑ Never give a yes/no response
- ❑ Explain your thinking process

Conclude

- ❑ Give a very brief statement to conclude
- ❑ Nod and smile

Difficult questions

- Don't break into nervous laughter when you cannot answer a question
- Calmly admit that you don't have the answer
- Even you don't have an answer, explain your logical thinking
- Most audiences are sympathetic

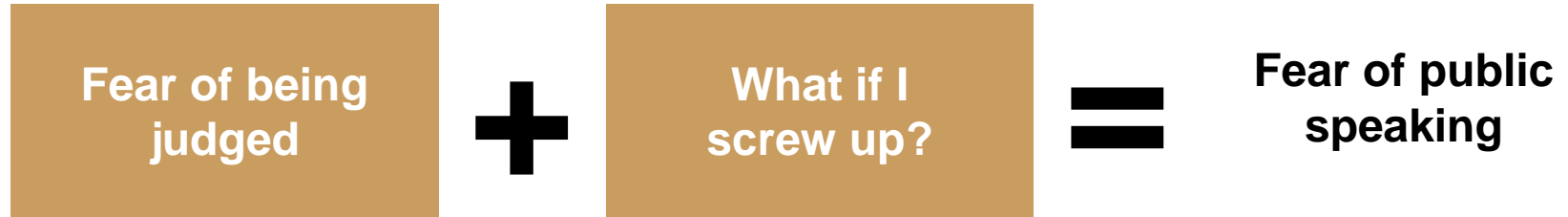
Criticism

- Nod and smile as you listen to criticism
- If you do not agree with your audience:
 - Don't fold your arms/shake your head/frown..
 - Don't answer back with "but"
 - Say thank you
- Remember: there is no 'you vs them'

Criticism

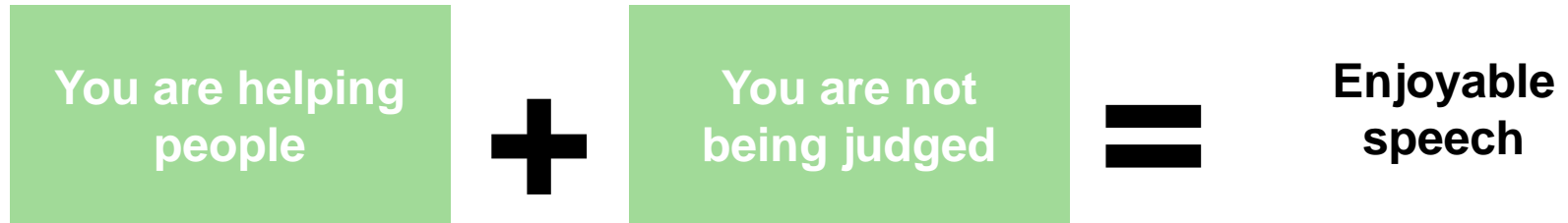
- “That’s an interest angle, if I may add on that...”
- “Thank you for your insight. It is valuable. If I may add a different perspective..”
- Find the part of the criticism that you can agree on:
 - “Thank you, we both think thatis important”
 - “Thank you for your valuable comment, I in particular agree with the part you mentioned aboutand regarding (what you disagree).....my view is that.....”

Bad advice



- Practice in front of a mirror
- Just ignore your anxiety
- “Focus in” as if the audience is not there
- Imagine you are presenting to melons

Handling anxiety



- Normalize public speaking
- Believe in what you are going to share
- Imagine that all participants are your friends
- Focus on the needs of the audience

Conclusion: What to avoid...

- ❑ focus on oneself rather than on the audience
- ❑ blame the setup/room/temperature/equipment/colleagues
- ❑ apologize for every minor thing
- ❑ look impatient and just want to finish with
- ❑ read out from a presentation deck that has everything typed up
- ❑ use filler: ah, uh, I mean, like, okay, you know, um...
- ❑ walk up and down too much
- ❑ look to the ceiling/floor (whether presenting or waiting for your turn)
- ❑ use jokes that are tone death
- ❑ use acronyms (SPV, RBS, CDO...) that are unexplained