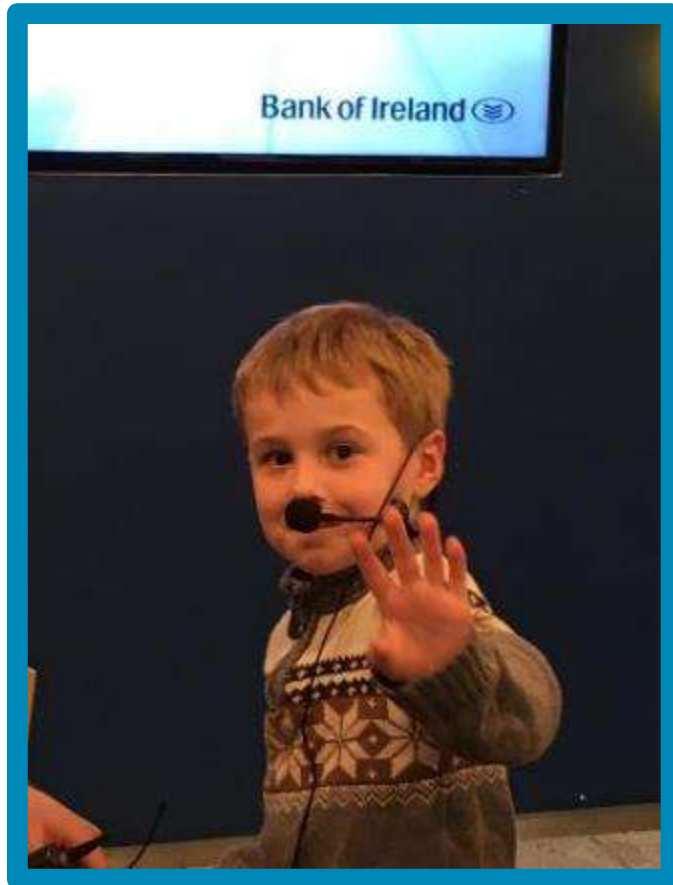


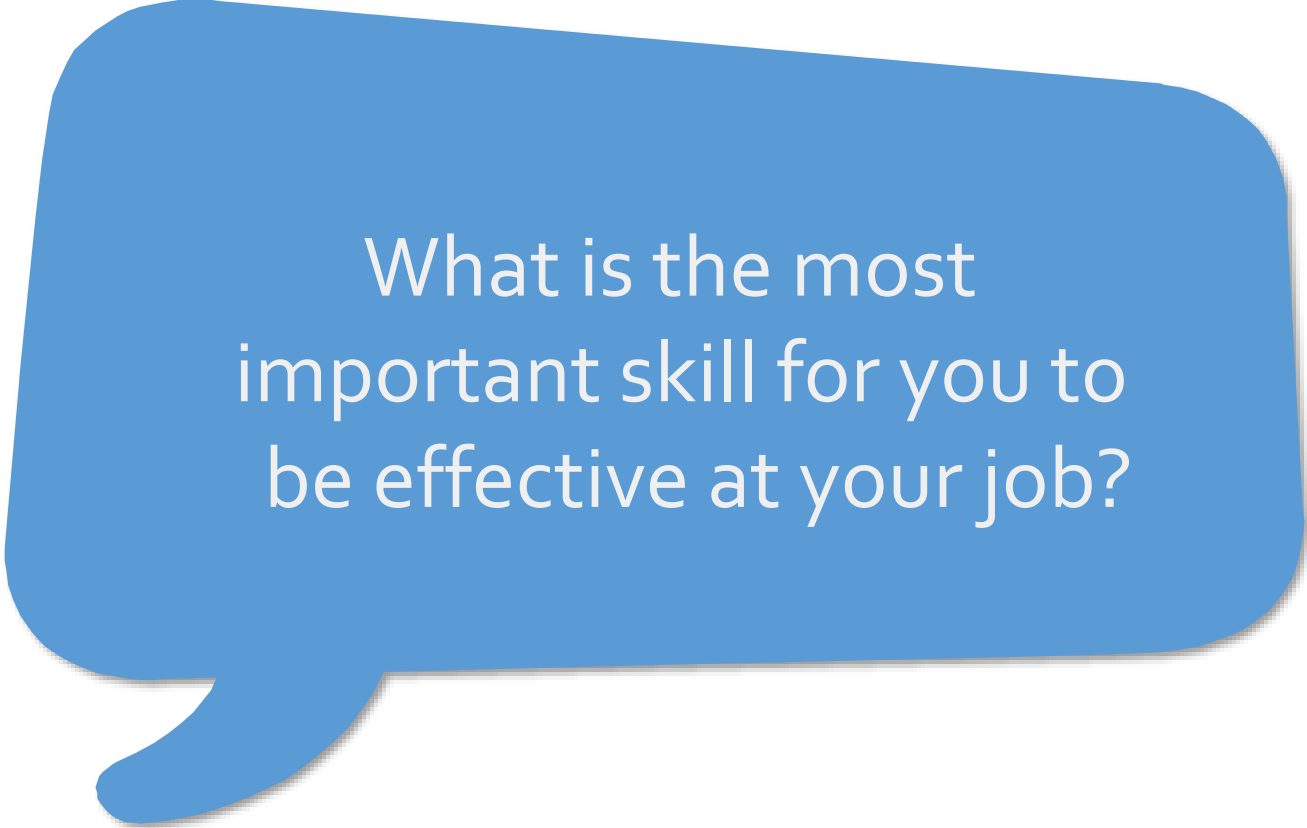
COMMUNICATING YOUR RESEARCH

UCC, Sept 2019

Introductions



Explain your research to a 7 year old, in one minute or less



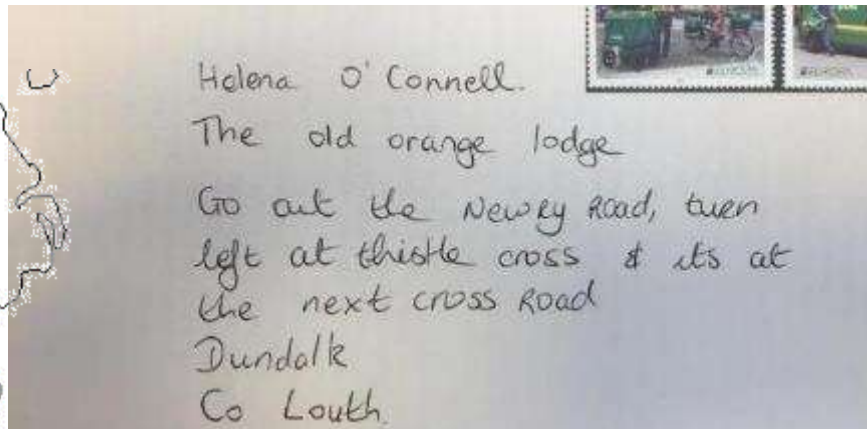
What is the most important skill for you to be effective at your job?



An Post



An Post



Pat and Helena O'Connell



Enchanted paper
Manufactured in Ireland
Great Ireland Woolpaper

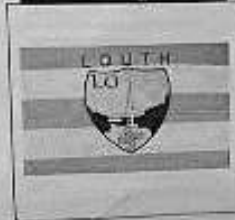


pleasant
peps



100% recycled
paper

€ 0.68
Fire



Give this to postman
Pat in Dundee, he will
know what do with it.
He'll probably just be
happy there are no
feckin' pictures to decipher
this year. Happy Christmas Pat,
And the other Pat + Helen





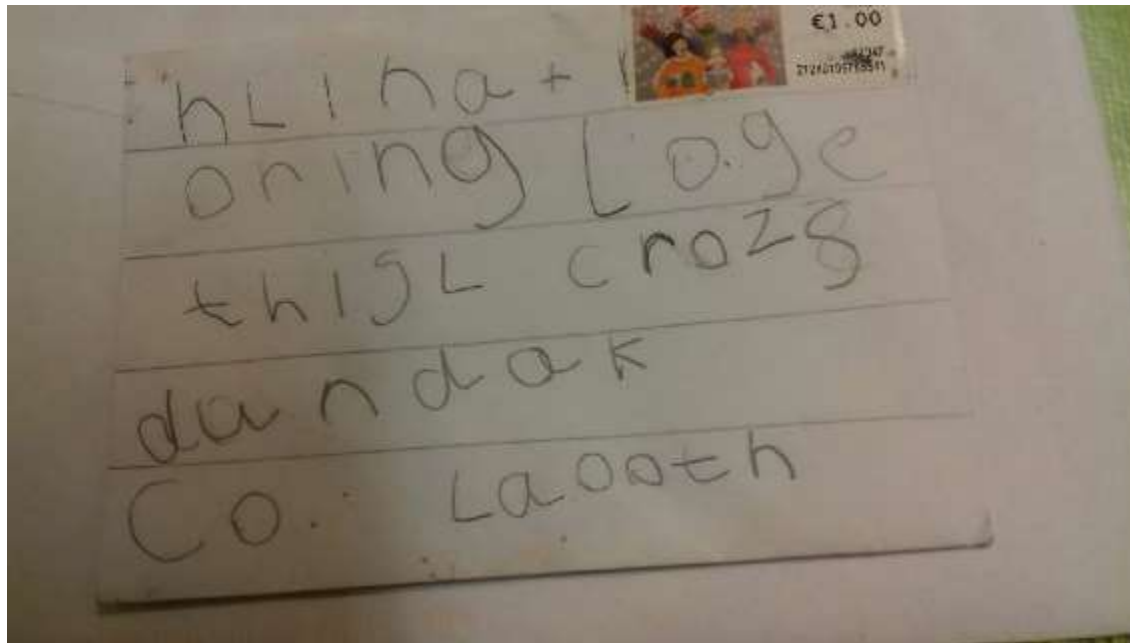
Clues Down

1. _____ Benham Carter, Actress in all of Tim Burton Movies, even ones that do not exist yet. (6)
2. Daniel the Liberator (8)
3. Enjoyable feeling, brought on by solving some cute hoor'y crossword (8)
5. One skin colour Trump will not be prejudiced against (6)
6. Jesus' Birthday (9)
9. How Postal workers put their millions into the bank (5)

Clues Across

1. What you tell the bouncer you are, because it is an easy word to say drunk (5)
3. The baker (3)
4. An Everest or Vesuvius say (5)
6. A Garden, A Kingdom and even one for a rebel (5)
7. Really angry, like when your wife says 'it's fine, honestly if that is really what you want to do, it's fine' (5)
8. O Flower of Scotland, when will we see your like again. (7)
9. Diminutive County home to Ireland's greatest town, and also Drogheda. (7)
10. Home of Stephen Kenny's Black and White Army (7)

2017



2018



Personalised Communication Skills audit

PP technology

Digital literacy

Story boarding/templating

Managing nerves

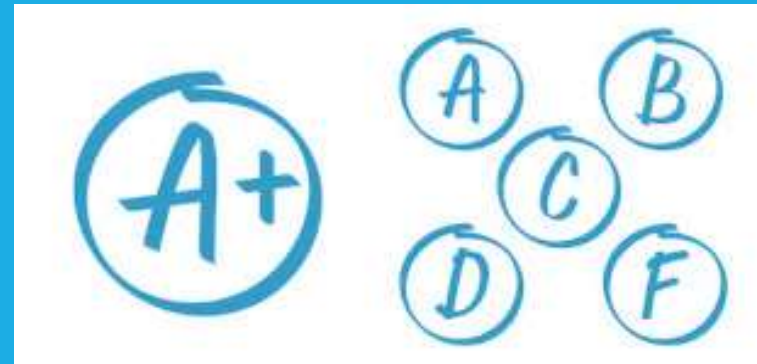
Looking professional

Establishing credibility

Doing topic specific research

Having a defined strategy

Crafting a strong message



Over to you?

What do you want to talk about?

1. The basics – what is effective communication?
2. Crafting a impactful communication strategy
3. Making presentations – The shape of great presentation
4. Making presentations – Design and delivery
5. Understanding (and using) your personal communication
6. The academic bits (impacts etc)style

COMMUNICATION STRATEGY

What is your communication strategy?



POBLAICHT NA H ÉIREANN
THE PROVISIONAL GOVERNMENT
OF THE
IRISH REPUBLIC
TO THE PEOPLE OF IRELAND



“ In the



Protecting the Integrity & Reputation of Irish Horseracing

Mission

Our Vision

To be the best R

Our Mission

Excellence in ind

Mission Statement & Values

Pfizer aim to innovate to bring therapies to patients that significantly improve their lives

Good health is vital to all of us, and finding sustainable solutions to the most pressing health care challenges of our world cannot wait. That's why we at Pfizer are committed to applying science and our global resources to improve health and well-being at every stage of life. We strive to provide access to safe, effective and affordable medicines and related health care services to the people who need them.

We have a leading portfolio of products and medicines that support wellness and prevention, as well as treatment and cures for diseases across a broad range of therapeutic areas; and we have an industry-leading pipeline of promising new products that have the potential to challenge some of the most feared diseases of our time, like Alzheimer's disease and cancer.



Can you write your research mission statement?

“A **mission statement** is a short **statement** of why an organization exists, what its overall goal is, identifying the goal of its operations: what kind of product or service it provides, its primary customers or market, and its geographical region of operation”

- Consider it as an elevator pitch for your research
- Show your passions
- 1-2 minutes
- Valuable to a range of audiences (specialised and general)

Now we need a communication plan

- clear and measurable communications objectives with evaluation
- relevant audiences and available channels
- a plan of activities and a timetable
- communication risks and mitigation
- resources – time, scope and cost

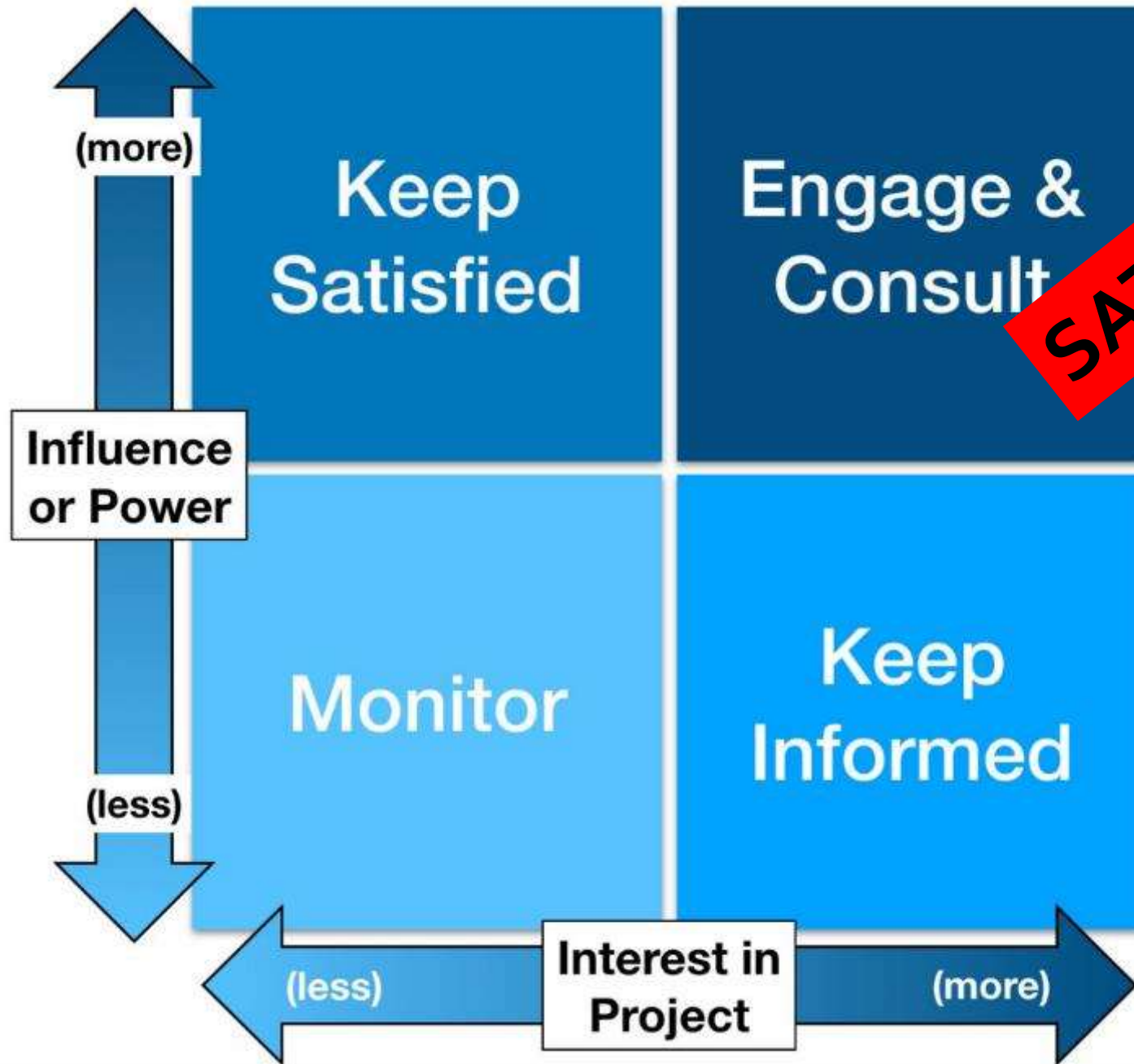
What to include

Relevant factors

- Annual plan?
- Major, complex, long term projects
- major announcement –e.g. new grant, new job ...
- A big event – eg a conference
- Professionally relevant personal announcements

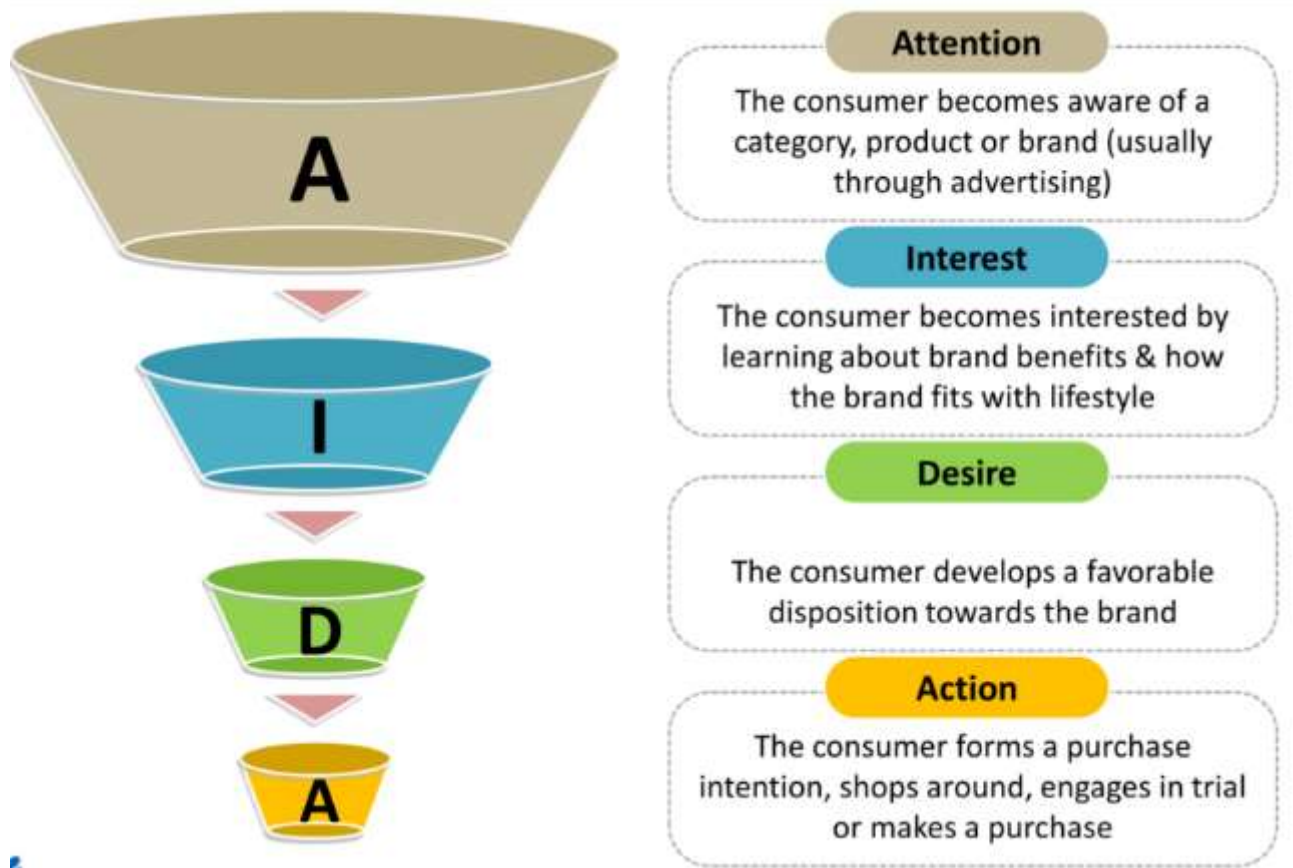
Relevant audiences

- The media
- The public
- Funders
- Colleagues
- The wider university
- The wider sectoral research community
- Industry (if relevant)

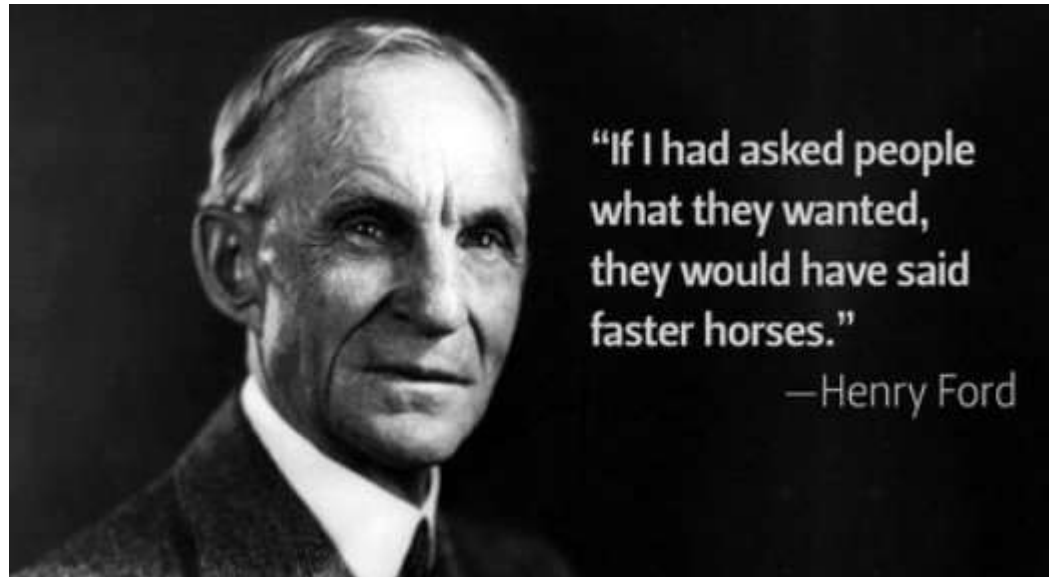


SATISFY

What do you want your audiences to know (think or do)?



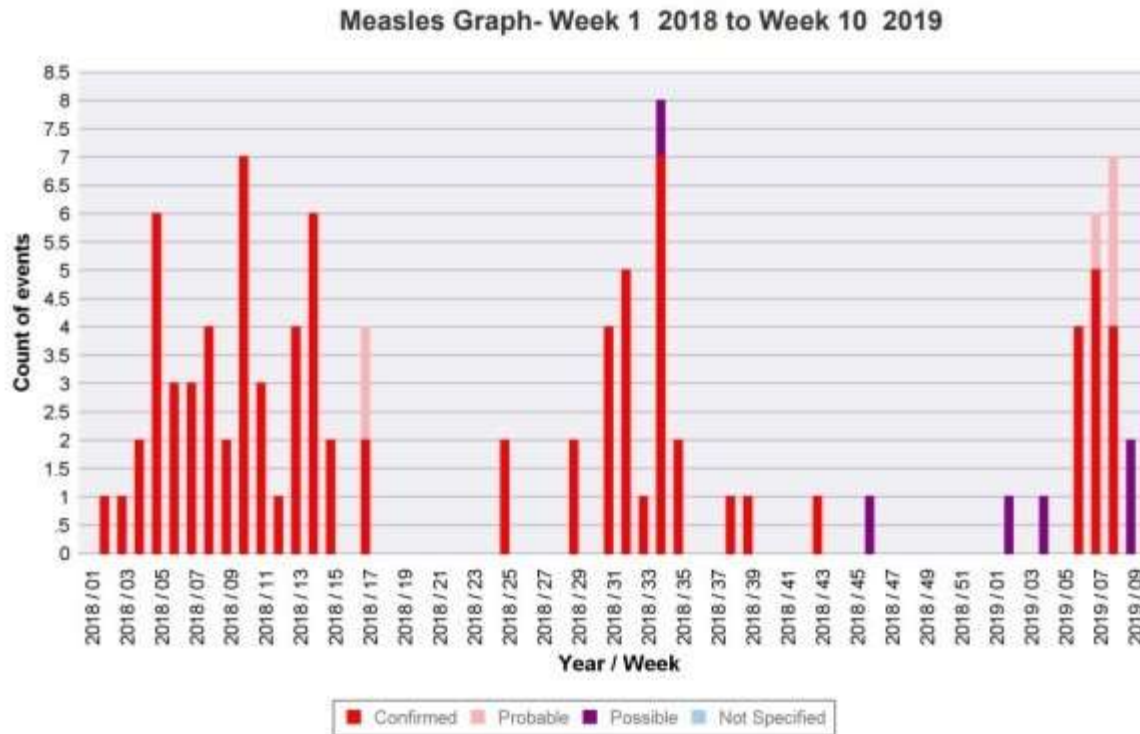
WIIFM



Some other audience considerations

- Be clear, honest and consistent
- Tailor your messages to your audiences: the content and the tone
Use evidence: statistics and case studies
- Consider two-way engagement

One exception....

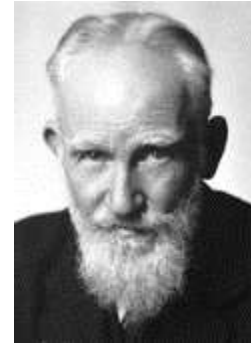


COMMUNICATION BASICS

It's a bit more complicated than talking the talk

Communication

- “The single biggest problem with communication is the illusion that it has taken place.” — George Bernard Shaw
- “When the trust account is high, communication is easy, instant, and effective.” Stephen R. Covey, *The 7 Habits of Highly Effective People*



The art of communication



CLA **RITY**

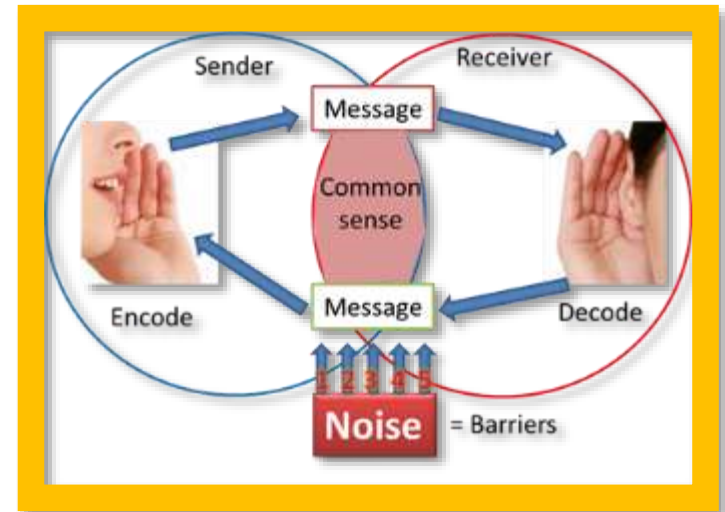
Basically all project comms come down to:

- Who are they?
- What are their motivations
- What level of detail do they need?



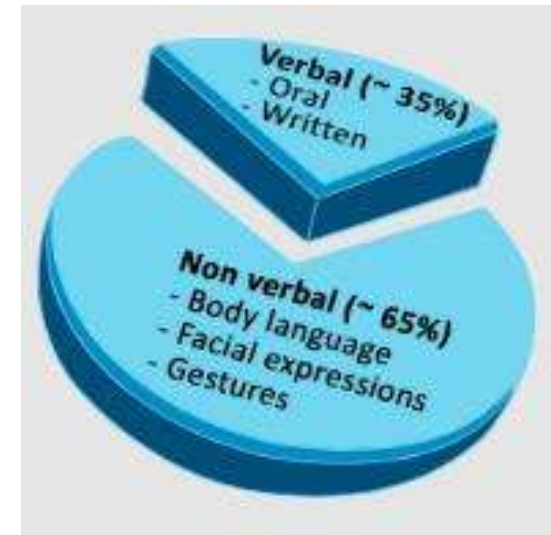
There are 4 facets in all types of communication

1. Sender
2. Receiver
3. Information
4. Behaviour



70% of all communication is distorted, misunderstood, misinterpreted, rejected or just not heard

Forms of communication



Nonverbal: 150,000 years
Oral: 55,000 years
Written: 6,000 years

Share model for communications

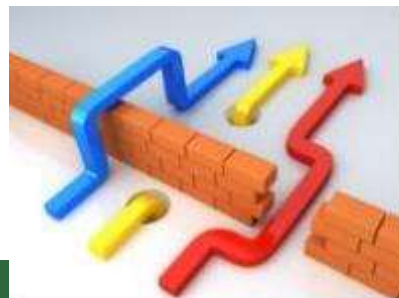
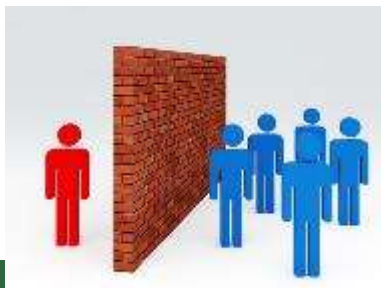
- State the main point of your message
- Highlight other important points
- Assure the receiver's understanding
- React to how the receiver responds
- Emphasize/summarize your main ideas



Barriers to communication

Some common barriers to interpersonal communication include:

- Unclear process: The receiver and sender may not share the same language, slang, jargon, vocabulary, symbols
- Chain of command: There may be too many layers that a message passes through between sender and receiver
- Large size of an organization, geographic distance: Large numbers of receivers require good message sending methods
- Personal limitations: language, cultural differences, shyness, unorganised thinking, fear of rejection





Active listening

What is listening?

Active listening

It is following and understanding i.e. hearing with a purpose

Definition: The process of receiving, constructing meaning from, and responding to spoken and/or nonverbal messages; to hear something with thoughtful attention

Hearing is a natural physical process and passive, listening is a physical and mental process, a learned skill. It's hard, you need to choose to listen and become involved in the process

Active listening

- Tips to listen better
- Listen between words
- Active/visual listening
- Be involved, ask questions, encouraging gestures
- Tips to be a better speaker
- Ask open questions
- Develop techniques to challenge unsuitable approaches in a non threatening manner

Listening exercise



We listen at 125-250 wpm, think at 1000-3000 wpm

75% of the time we are distracted, preoccupied or forgetful

20% of the time, we remember what we hear

More than 35% of businesses think listening is a top skill for success

Less than 2% of people have had formal education in listening

Answers

- 1.Sleep
- 2.Mattress
- 3.Pillow
- 4.Snore
- 5.Duvet
- 6.Pillow
- 7.Night time
- 8.Darkness
- 9.Pyjamas
- 10.Blanket
- 11.Cot
- 12.Dream
- 13.Nap
- 14.Pillow
15. Sheet
- 16.Nightdress
- 17.Alarm clock
- 18.Lamp
- 19.Moonlight
- 20.Bedhead

The 4As of active listening

1. **Attitude**

Maintain a constructive Attitude

2. **Attention**

Strive to pay Attention

3. **Adjustment**

Cultivate a capacity for Adjustment

4. **Activity**

Listen and respond to speaker to ensure they know you are hearing them

Why is active listening so important?



Bus Driver



PRESENTATIONS

How to be persuasive



What is a presentation?



Storytelling

Aristotle



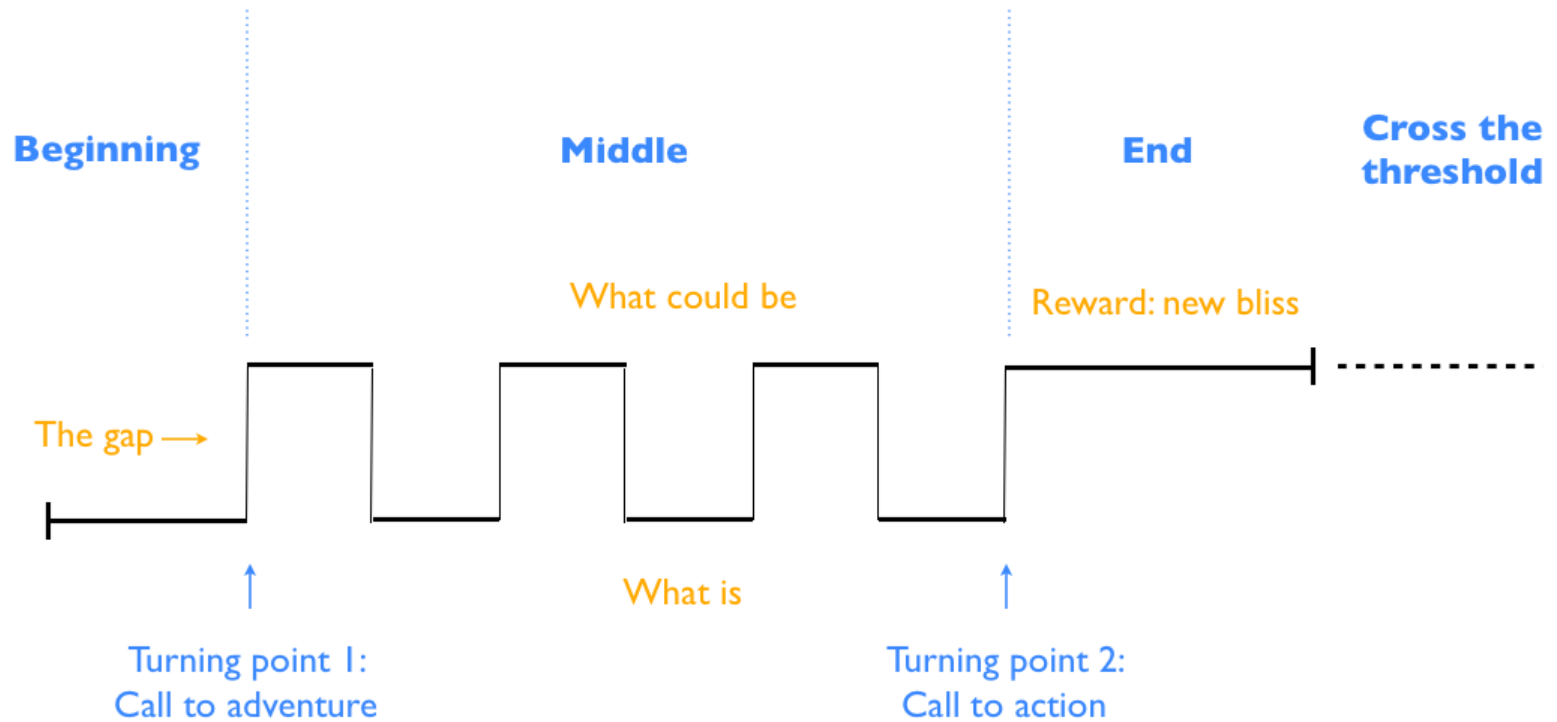
Freytag



Duarte



Shape of great presentations



A real sparkline

Jobs's Sparkline

Establish What Could Be

"This is a day I've been looking forward to for two and a half years. Every once in a while, a revolutionary product comes along that changes everything... Today we're introducing three revolutionary products of this class. The first one is a widescreen iPod with touch controls, a revolutionary mobile phone, and the third is the breakthrough internet communications device. So three things: A widescreen iPod with touch controls, a revolutionary mobile phone, and a breakthrough internet communications device. An iPod, a phone, and an internet communicator. An iPod, a phone... are you getting it? These are not three separate devices. This is one device. And we are calling it iPhone."

Lure with Suspense

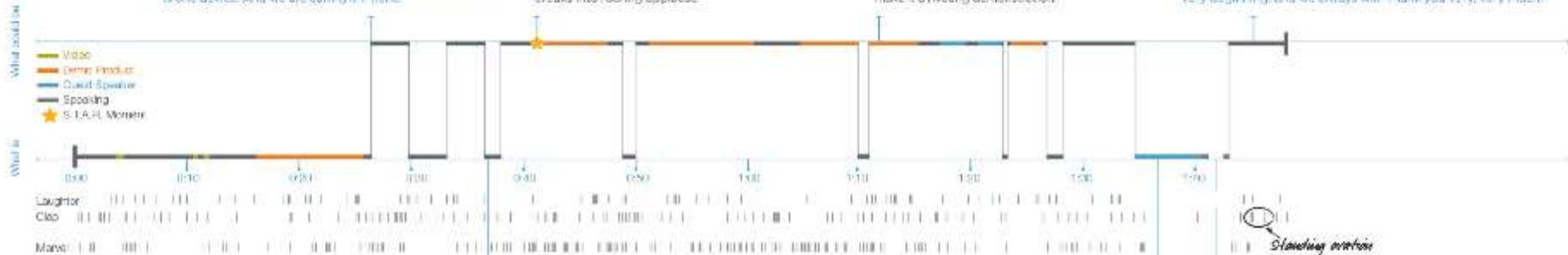
Jobs has a magical sense for creating suspense. For fifteen minutes, he reviews the hard-wired features of the iPhone by clicking through photos of the device while it is turned off. Yes, off! When he finally powers up the iPhone and demonstrates the scrolling feature for the first time, the audience gasps and breaks into roving applause.

Keep Them Engaged

When Jobs demos the new features, he doesn't merely go through a checklist of the features—he plans clever scenarios. Every thirty seconds or so, he showed a new feature by completing a task the way a real user would. He makes phone calls to a colleague while another colleague calls him, he checks his visual voicemail and plays a message from Al Gore congratulating him on the launch; he calls Starbucks to order four thousand lattes to go. He paced the tasks in his demo forty-seven times to make it a riveting demonstration.

The New Bliss

Jobs ends his presentation having enthusiastically moved his audience from what is to what could be. But he doesn't stop there. He reminds them of Apple's revolutionary product heritage and assures them that they'll do this again. His ending sets the stage for a new beginning. "I didn't sleep a very last night. I was so excited about today because we've been so lucky at Apple. We've had some real revolutionary products. The Mac in 1977 is an experience that those of us that were there will never forget, and I don't think the world will forget it either. The iPod in 2001 changed everything about music. We're going to do it again with the iPhone in 2007. We're very excited about this. There's an old Wayne Gretzky quote that I love: 'I skate to where the puck is going to be, not where it has been.' We've always tried to do that at Apple since the very, very beginning, and we always will. Thank you very, very much!"



Establish What Is

Jobs sets up what is in perfect form. He gives an update on the market and performance of several products: Intel transition, retail stores, iPod, iTunes, and Apple TV. He demos the recently released Apple TV.

Create Contrast

Jobs comes back down to what is a few times in the speech by comparing the iPhone features with current products on the market that amplify the significance of this breakthrough.

Make Them Marvel

Jobs creates a sense of wonder by interjecting phrases that invite the audience to marvel at the product. A few examples of the language he uses: "This is a revolution of the first order—literally firing the new Internet to your phone... isn't this great?... So we think this is pretty cool... We've designed something wonderful for your hand, just wonderful... It's pretty awesome."

Invite Guest Speakers

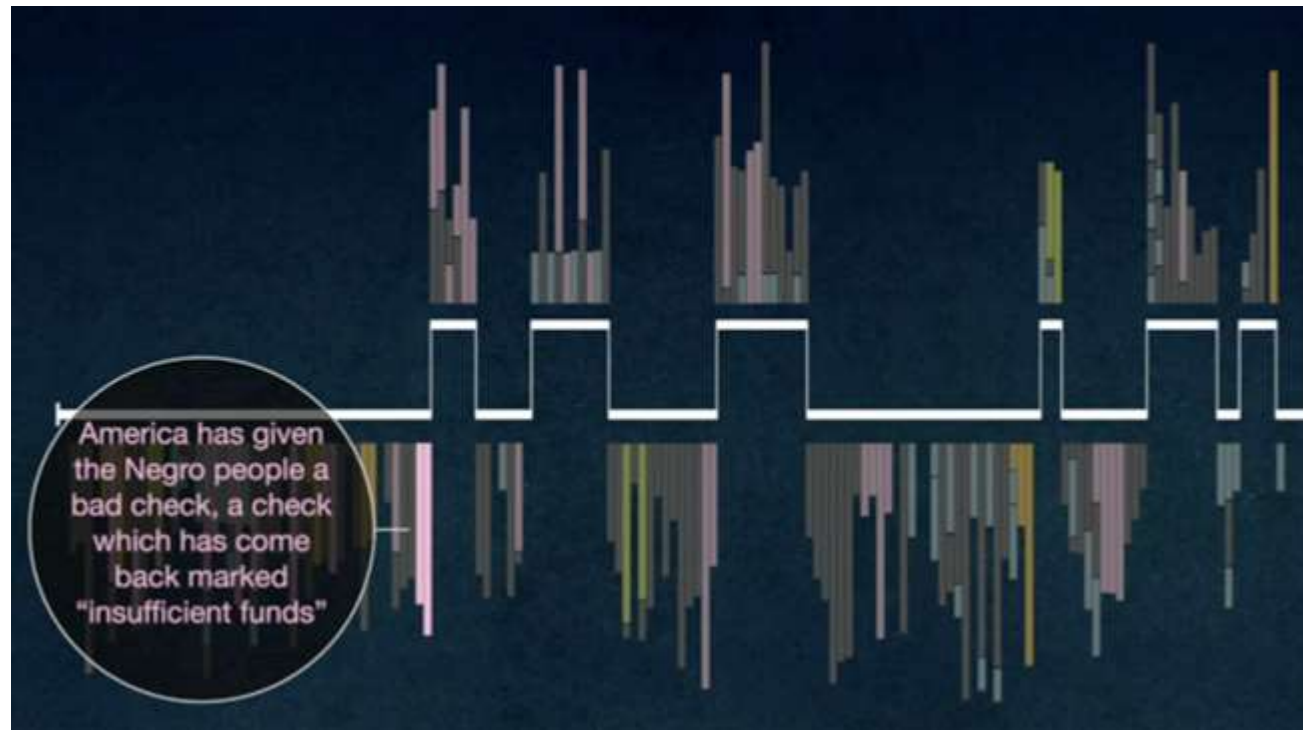
Jobs invited three partners to present. The first two breezed through their parts but the Cingular/WIREless CEO read through cue cards, repeated what was already said, and rambled way longer than he should have, too bad.

Be Flexible

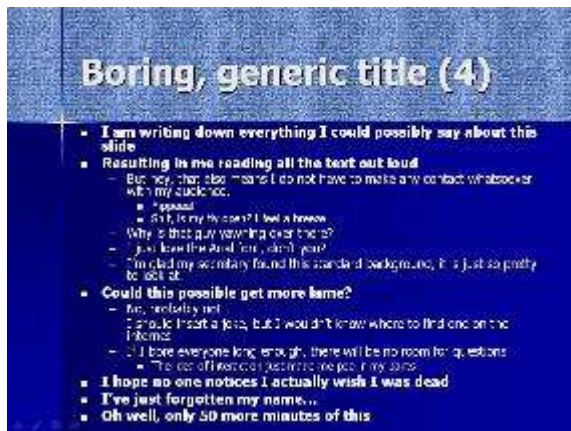
When the clock stops working, he pauses, smiles, and fills the time it takes to fix with a funny story about how he and Steve Wozniak used a TV journal as a prop on an unsuspecting college student's when they were in high school. Carmine Gallo said, "In his one-minute story, Jobs revealed a side of his personality that few people get to see. It made him more human, engaging, and natural. He also never got flustered."



Martin Luther King



Traditional v persuasive presentations



- Introduction
- Methods/technical details
- Results
- Conclusions
- Any questions

- Current understanding
- What could be
- New norms
- New thresholds



Roles and responsibilities

- At the core of all presentations is an idea that you are trying to sell to your audience
- You need to engage the audience
- They need to believe in your message by the end



Know your audience

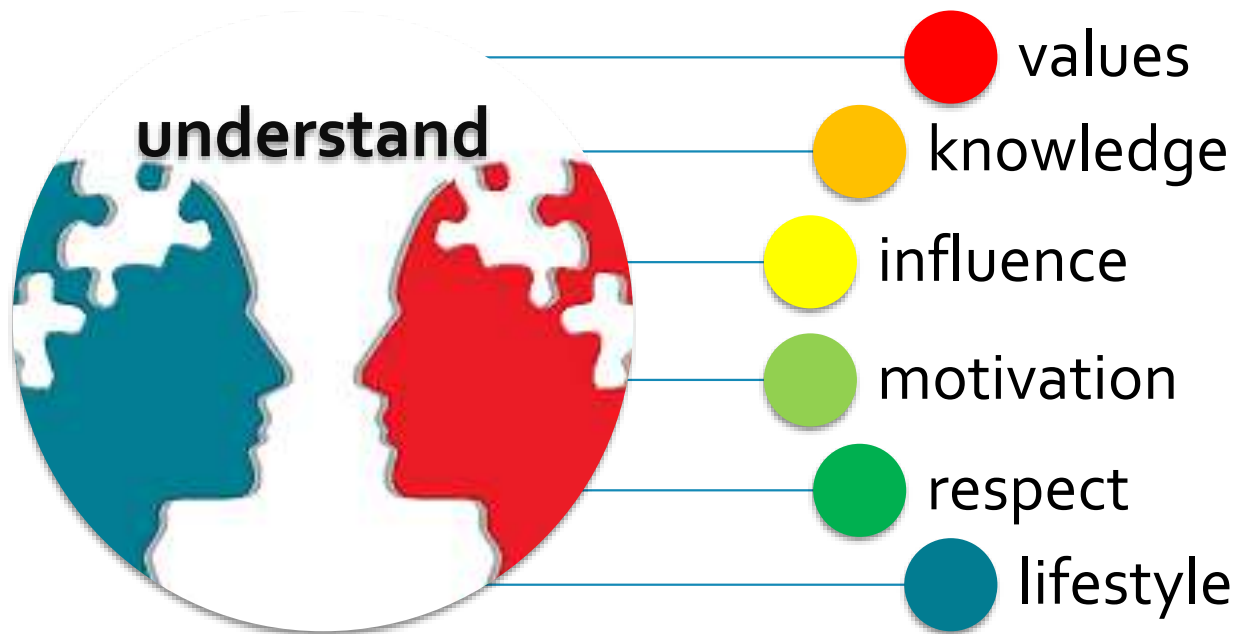
You are not the hero, your audience is. Unless they buy into your idea it will die. You are a mentor in the process (yoda to luke skywalkers audience)



- Audiences react badly to ego, arrogance, elitism
- Make a connection with them
- Don't assume they know the basics

Meet the hero

- Analyse your audience to understand what makes them tick and then make a connection



Know the mentor

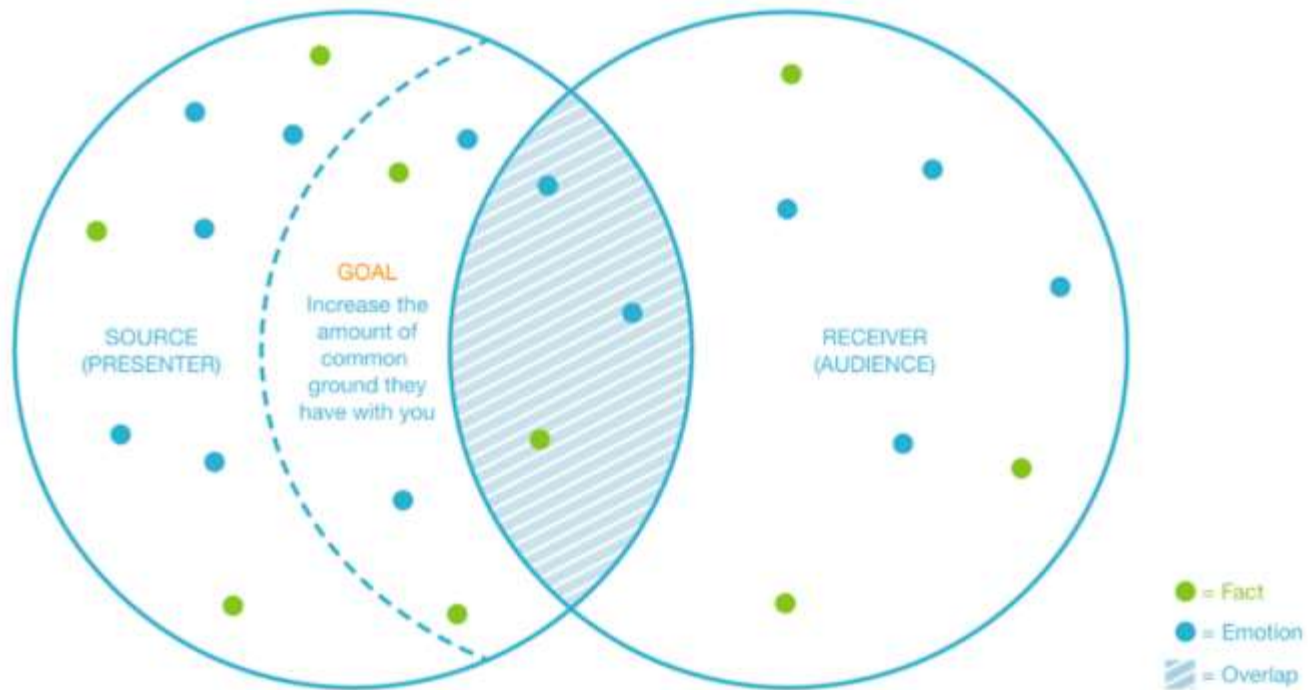
How can you unstick the hero/audience from their current view?

1. Need to provide previously unknown information
2. Need to motivate the audience

We will look at various tools to do this

E.g. connect with them through shared experiences, common goals or your unique qualifications/experiences

Know the mentor

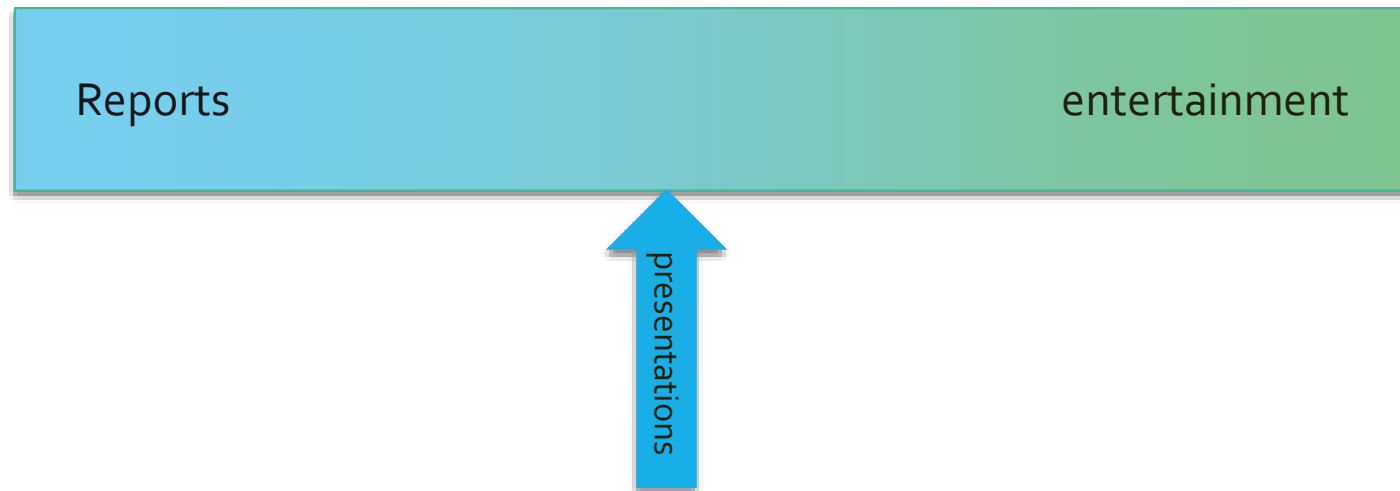


Don't design a Camouflage presentation

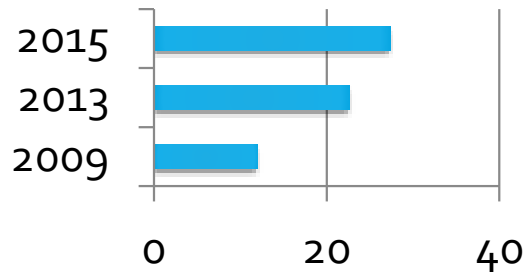
- People are interesting – show your personality
- Don't hide behind facts, unless you show the impact of the facts they will be forgotten



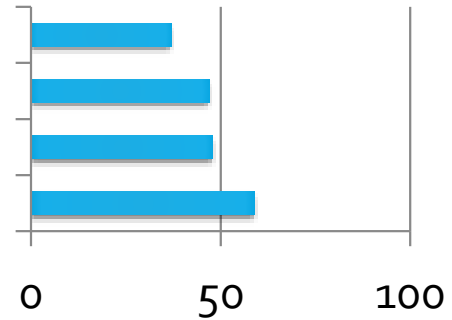
A spectrum of communication



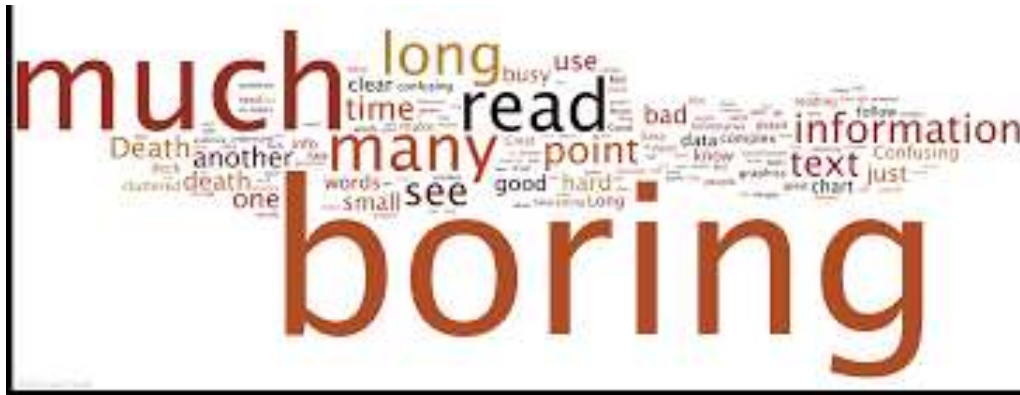
Some statistics



text too small



reading slides



Planning stage

"If I am to speak ten minutes, I need a week for preparation; if fifteen minutes, three days; if half an hour, two days; if an hour, I am ready now."

Woodrow Wilson

1. *Objectives*
2. *Audience*
3. Storyboard your ideas
4. Decide on visuals
5. Practice and delivery

How many Peaks?



Outline template

Idea / problem to be solved		
Question 1 answer evidence	Question 2 answer evidence	Question 3 answer evidence
Our new understanding		

Outline template

Idea / problem to be solved

Encourage scientists to innovators

Question 1

Is the science not enough?

Answer: no, modern science is less basic and more applied

Evidence: funding agencies only supply funding for projects with a commercial future

Question 2

I'm a scientist not an innovator

Answer: innovation can be learned

Evidence: case study of successful innovator who trained in tools of entrepreneurship

Question 3

what are the risks

Answer: could be left behind by competitors or fail

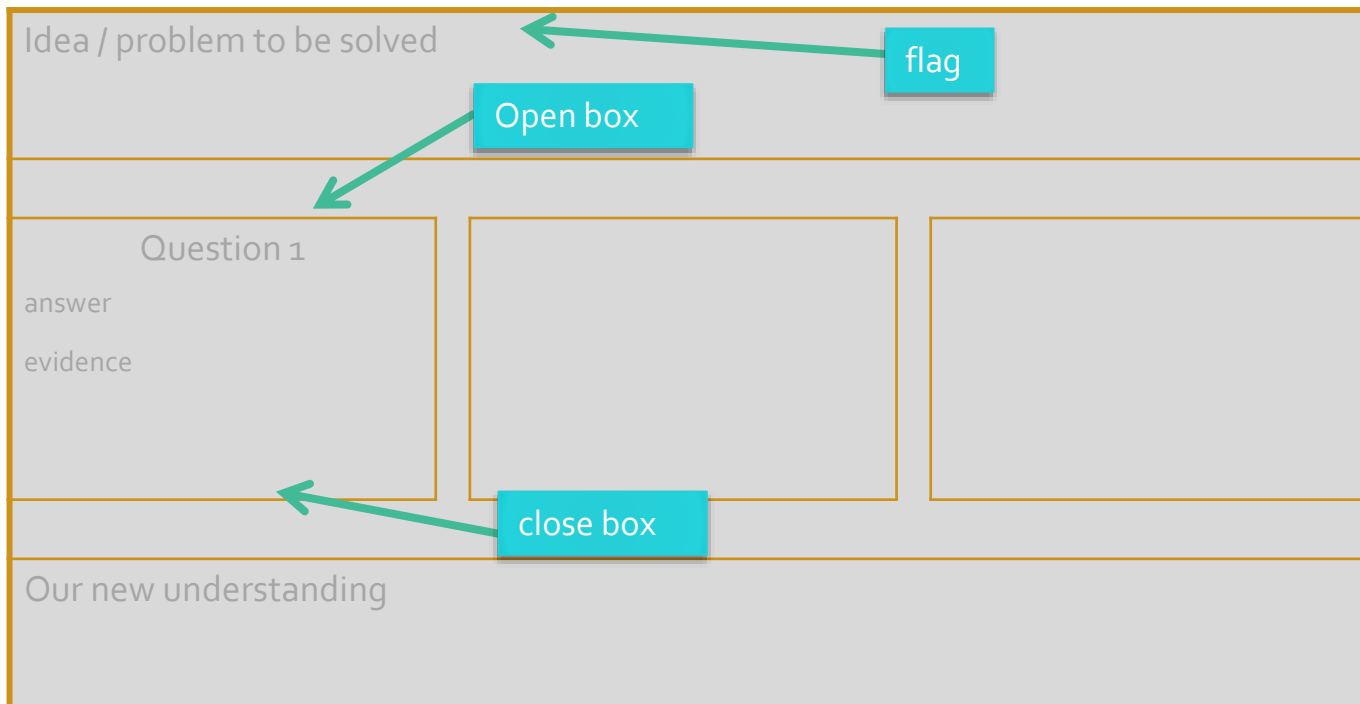
Evidence show most successful leaders in the field and their innovations, show some failed ideas

Our new understanding: Innovation is essential in modern science and there are techniques that can be taught to improved innovations

Outline template

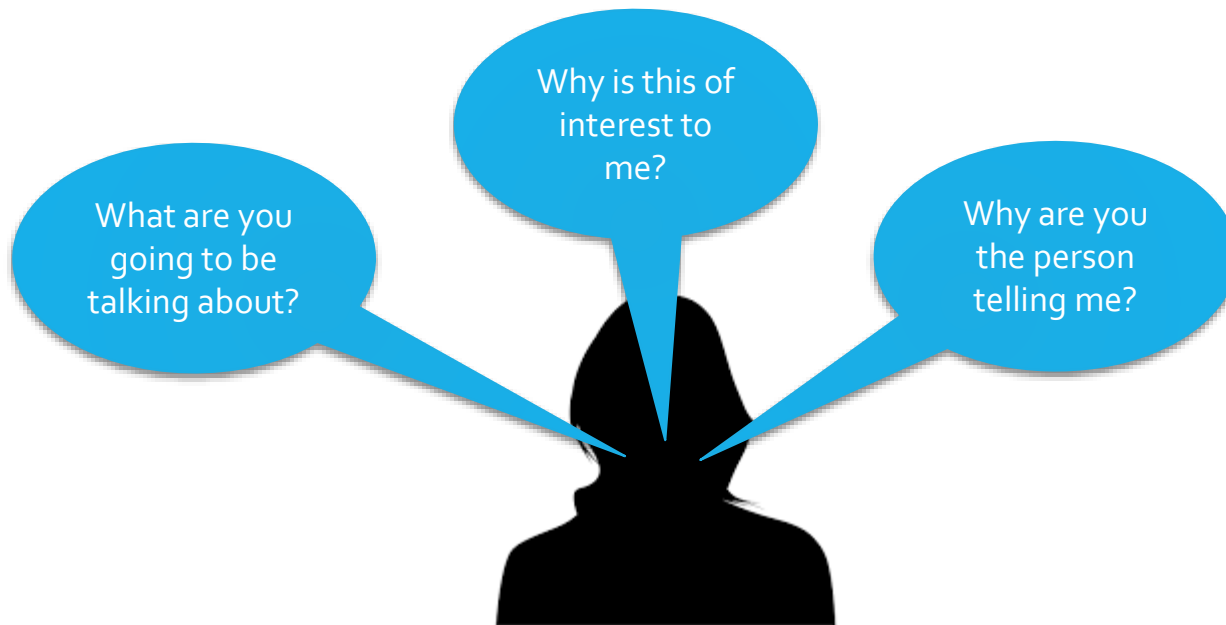
Idea / problem to be solved		
<p>Question 1</p> <p>answer</p> <p>evidence</p> <p>What data do I need What visuals do I need</p>	<p>Question 2</p> <p>answer</p> <p>evidence</p> <p>What data do I need What visuals do I need</p>	<p>Question 3</p> <p>answer</p> <p>evidence</p> <p>What data do I need What visuals do I need</p>
Our new understanding		

Signposting



The beginning

Prepare your audience for a journey



Open strong

- Learn your opening by heart.
 - Craft a strong message.
 - You want to hook your audience for what is to come
-
- Some ideas
 - A story
 - Shock
 - Ask a question / poll the room
 - Close your eyes and imagine
 - Silence

Some opening ideas

Sadly, in the next 18 minutes when I do our chat, four Americans that are alive will be dead from the food that they eat.

Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.

Sitting has become the smoking of our generation

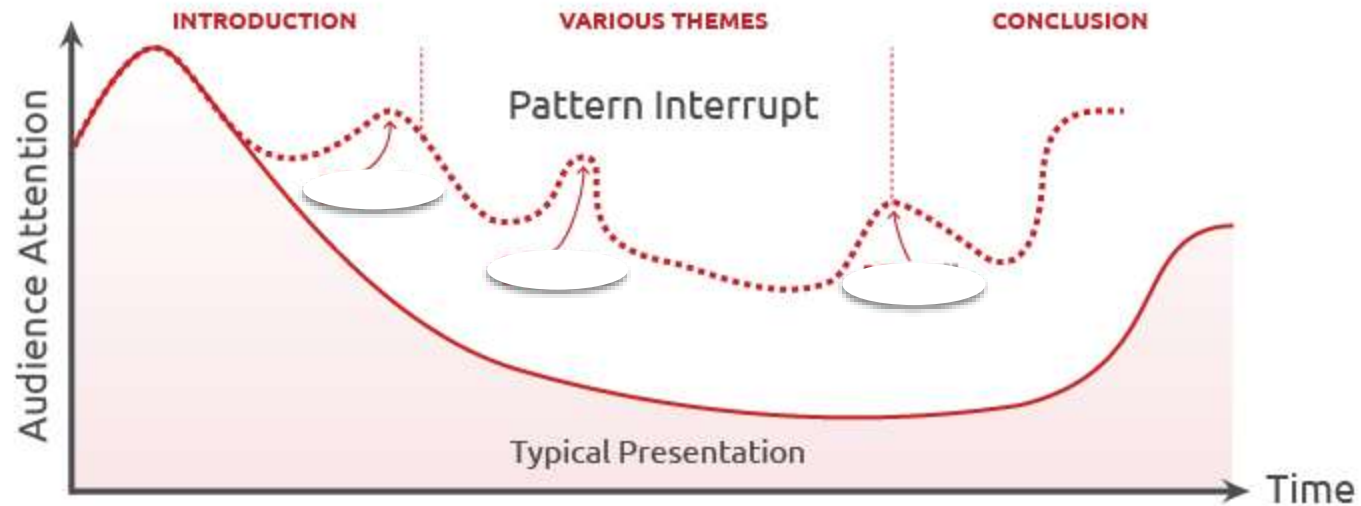
The sun shone, having no alternative, on the nothing new.

Call to adventure

At the end of the beginning you want to prepare your audience for what you want them to do/change/believe



Audience attention



Body of presentation

Types of slides:

Assertion evidence slides

Put 1 assertion at a time and image, chart or diagram to demonstrate the assertion

Key message slide

Key message with plain background – no distractions

Preview/summary slide

Overview of intro, body and conclusion

Black slide

When you're going to let yourself do the talking

timing

- 1-2 minutes per slide but depends on complexity
- Minimum 30 sec, max 3 minutes
- Think in terms of time per idea rather than time per slide
- Allow approx. 10% of time for introductions and closing
- Aim to speak for 90% of your allotted time
- rehearse

Call to action

- What are you asking your audience to do / change / believe
- Comes at end of each sub point in middle of presentation
- Transition to the next point
- Rule of three

THREE IS THE SMALLEST
NUMBER WE NEED
TO CREATE A PATTERN,
THE PERFECT
COMBINATION
OF BREVITY AND
RHYTHM.



Tools - metaphors

- Can offer a shortcut to understanding
- Word type or image type



Close strong

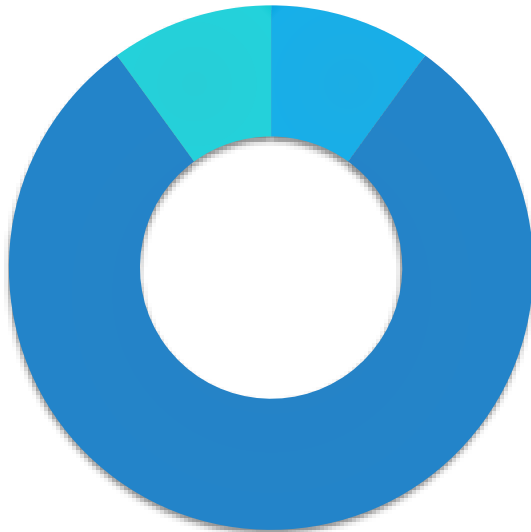
Design a 3 part closing

- remind audience what you told them,
- Include your call to action
- Define the end

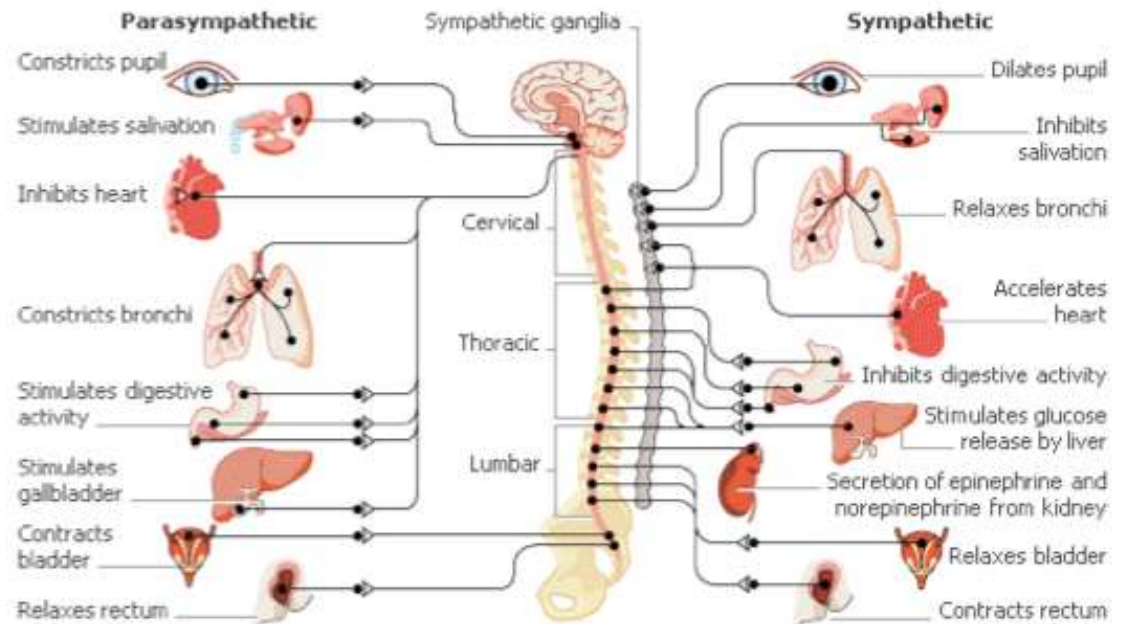
Some ideas

- Repeat the important stuff
- thank you, and I'll take questions now
- Remember the principle of recent

Overcome Glossophobia



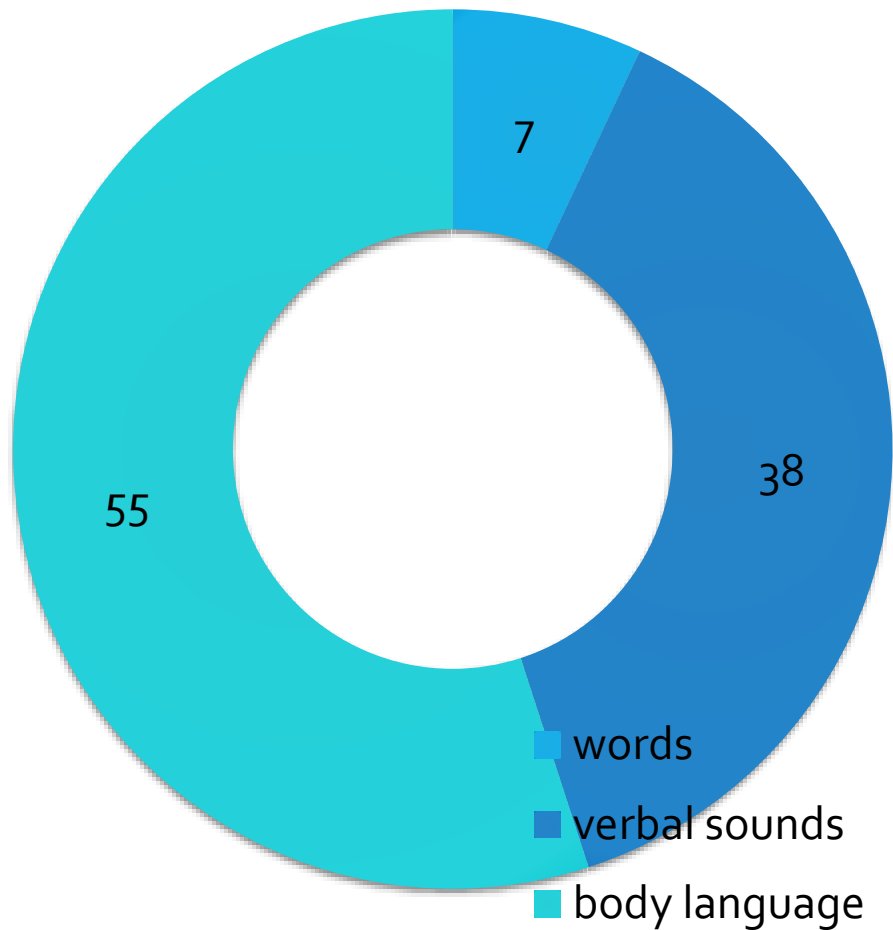
- glossophobia
- middle ground
- thrive



“Proper Planning and Preparation Prevents Poor Performance”

[Stephen Keague, The Little Red Handbook of Public Speaking and Presenting](#)

Body language



Body language

IT'S WHAT YOU DON'T SAY THAT COUNTS!



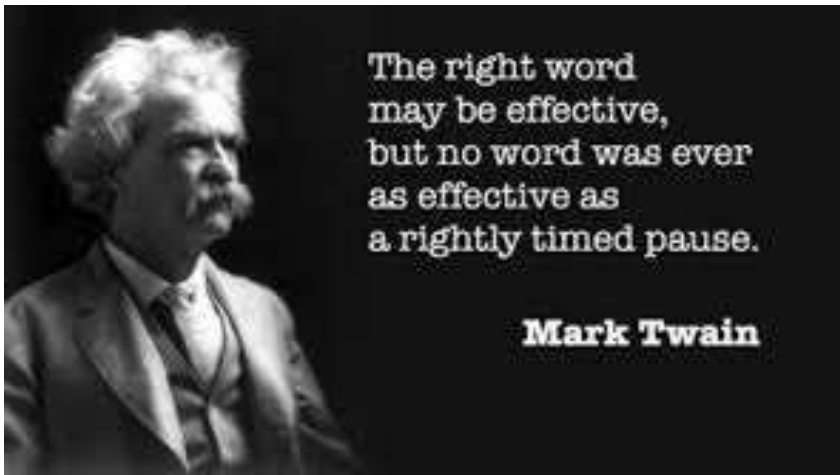
**LEARN TO READ AND INFLUENCE PEOPLE THROUGH
NONVERBAL COMMUNICATION.**

How to appear Confident

- Stand tall
- Use symmetric gestures
- Steady pace
- Lower your pitch
- Maintain eye contact
- Smile
- Dress well



Avoid nervous habits



Culture and Gender

Culture has a powerful effect on communication. Whether the culture comes from our nationality, race, ethnicity, work environment, peer group or gender, we cannot ignore its effect on communication. When we listen to a presentation, we bring our cultural styles with us.

- Starts at a very early age
- Every culture has rules and biases that it takes for granted
- Low context or high context
- Neutral or emotional
- Women disclose more personal details and are interested in cohesion, men stick to the topic and are hierarchical

Presenting in another language

- Don't learn by heart
- Don't compensate for simple language with complex slides
- Write down key technical phrases that you are unfamiliar with
- Practice speaking out loud in the alternative language as much as possible (in the car, in the shower)
- Don't apologise (it sounds like an excuse)

video





me



Darragh, 7 years old,
ESL, ASD, DCD, DYSL
Presentation to pitch
website

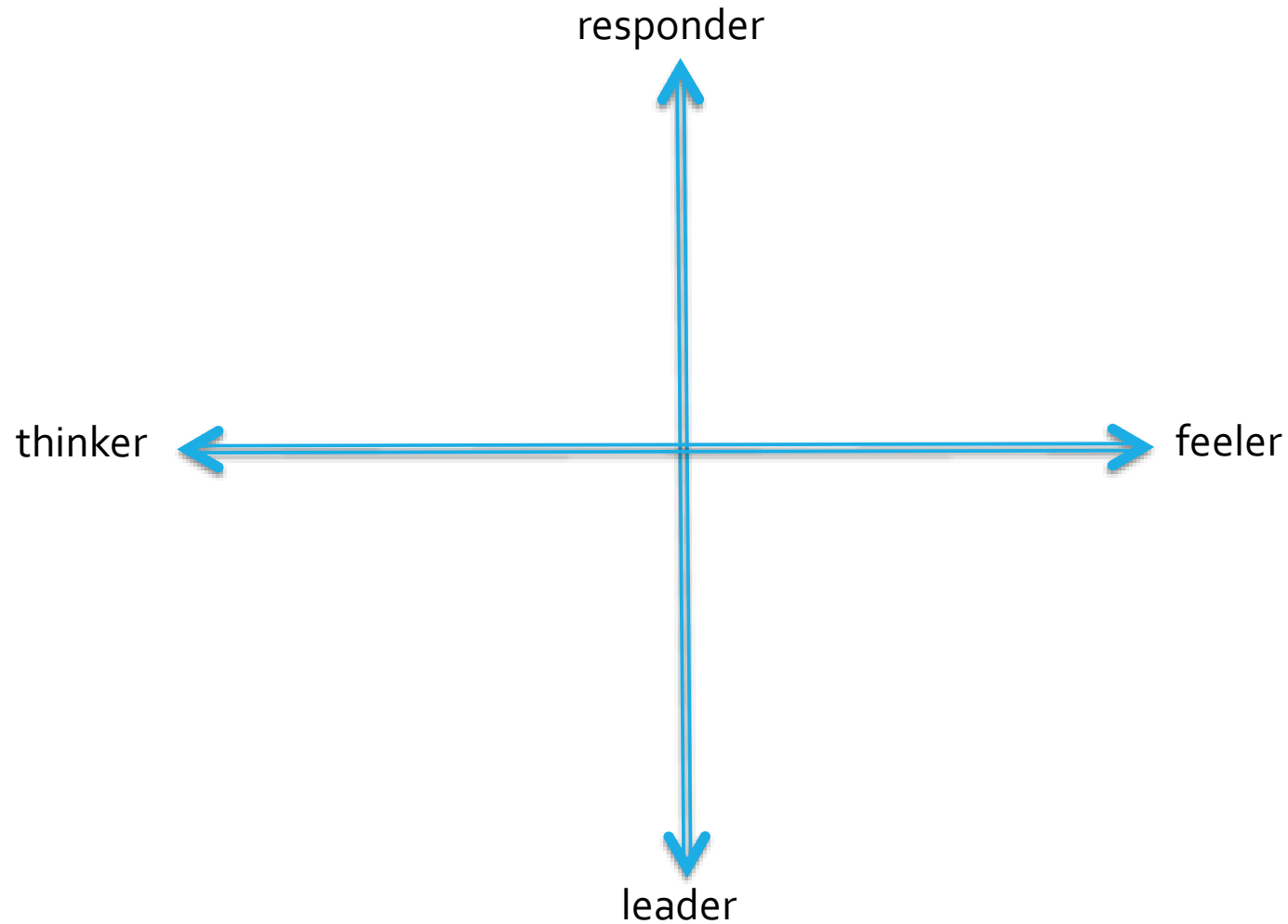


UNDERSTANDING YOUR PERSONAL COMMUNICATION STYLE

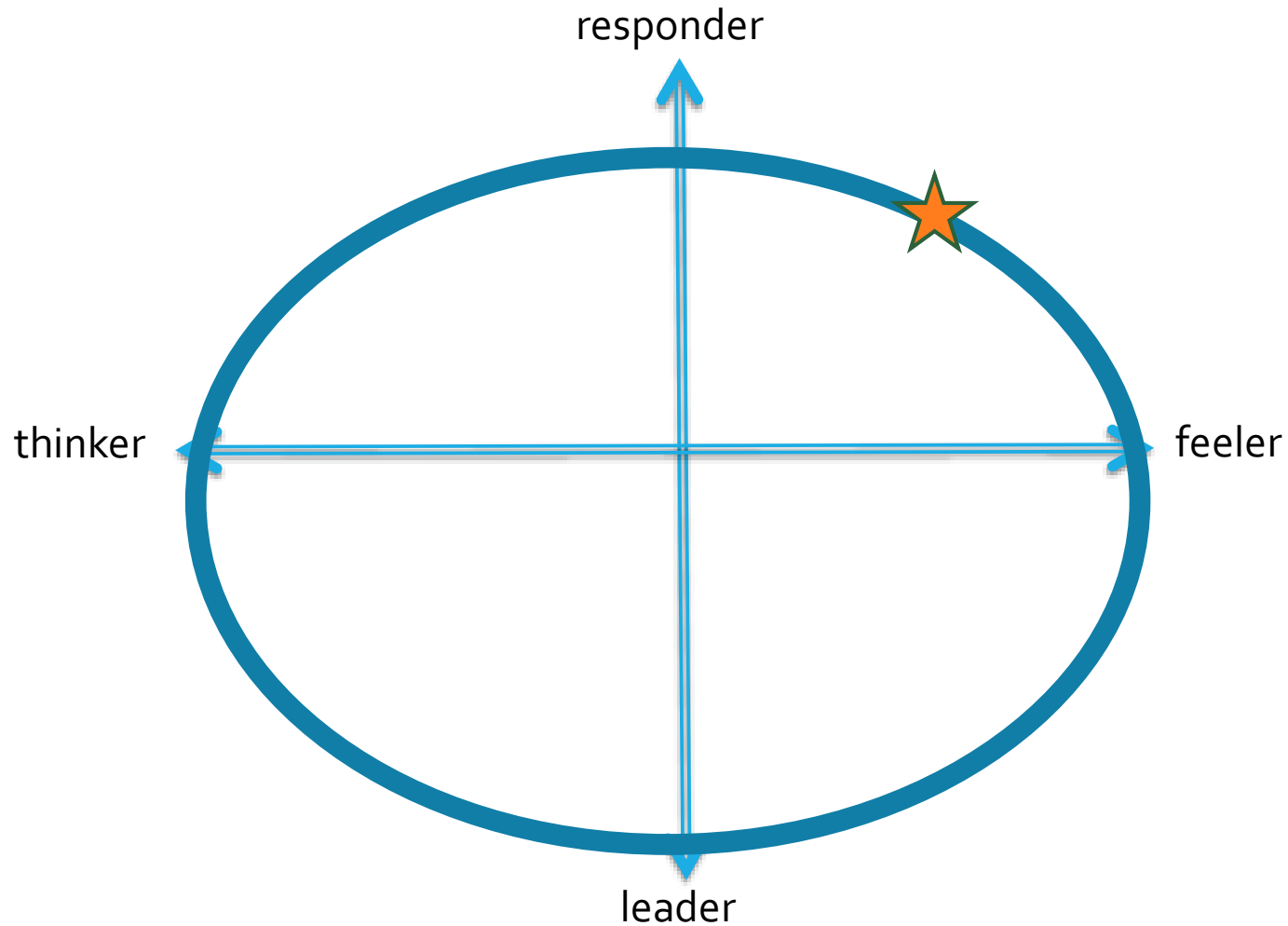
What is your communication style quiz



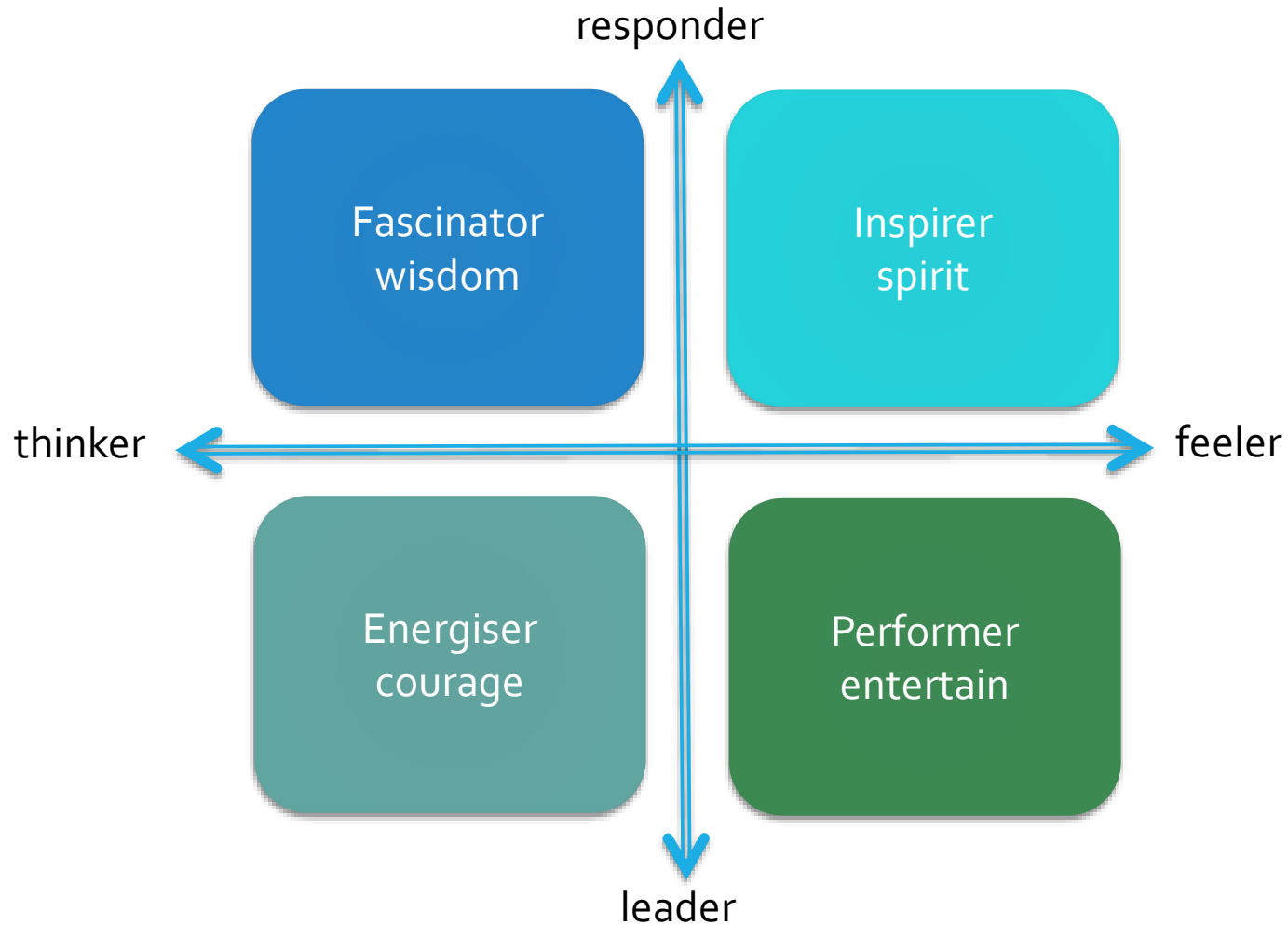
Your presentation personality



Your presentation personality



Your presentation personality



fascinator



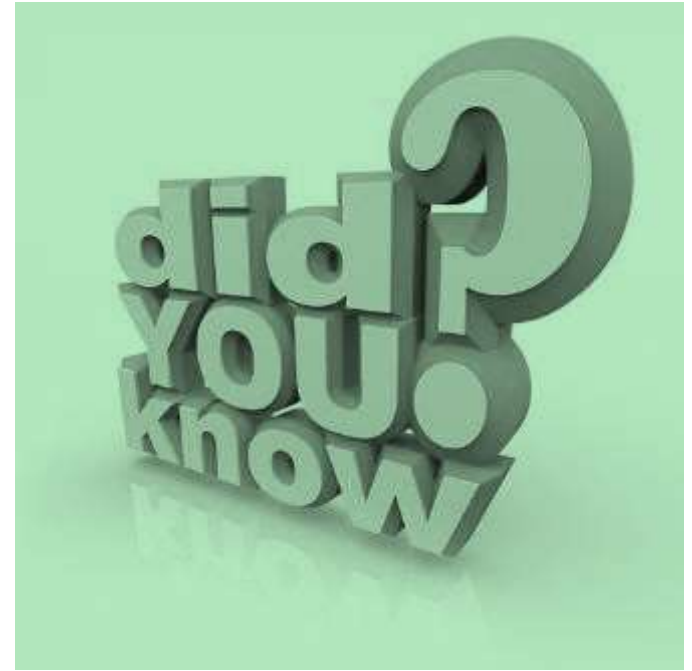
- They endear with their wisdom.
- They excel at planning.
- They are encouraging.
- They are good audiences.
- They enjoy getting others to perform.
- They enjoy watching others have fun.
- They enjoy sharing trivia.

Play your fascinator strengths

- Share trivia and interesting facts
- Pose brainteasers and riddles
- Share funny things other people do
- Plan surprises
- Tell analytical stories

Inspirer

- They endear with their spirit.
- They build rapport easily and on the fly.
- They are flexible and adaptable.
- They enjoy sharing their feelings with the audience.
- They are naturally caring.
- They read people easily.
- They enjoy sharing stories.



Play to your inspirer strengths

- Find a humorous story that is related to the topic
- Tell personal anecdotes
- Use pictures and videos to illustrate your point
- Insert surprising information
- Initiate one-on-one conversations

Energiser

- They endear with their courage.
- They welcome competition and challenges.
- They hold passionate beliefs.
- They have innate leadership qualities.
- They have a powerful presence.
- They enjoy pumping up a crowd.
- They are fond of puns.



Play to your energiser strengths

- Incorporate groaners and puns
- Challenge the audience
- Hold competitions
- Create team challenges
- Give pep talks

Performers

- They endear via charisma.
- They can perform spontaneously.
- They love the spotlight.
- They get others to crave their performance.
- They can get others to laugh.
- They enjoy and feed off laughter.
- They are great at relating to an entire audience.



Play to your performer strenghts

- Do impressions
- Recite a dramatic monologue
- Do a stunt
- Create a character
- Offer an actual performance



PUBLISHING – BEYOND ACADEMIC WRITING



Publishing – Prof Alan Kelly UCC



When, where, what, who, How?

Impact Factors

Journal Data Filtered By: Selected JCR Year: 2016 Selected Editions: SCIE,SSCI Selected Category Scheme: WoS

Rank	Full Journal Title	Total Cites	Journal Impact Factor	Eigenfactor Score
1	CA-A CANCER JOURNAL FOR CLINICIANS	24,539	187.040	0.064590
2	NEW ENGLAND JOURNAL OF MEDICINE	315,143	72.406	0.700770
3	NATURE REVIEWS DRUG DISCOVERY	28,750	57.000	0.060820
4	CHEMICAL REVIEWS	159,155	47.928	0.246600
5	LANCET	214,732	47.831	0.404930
6	NATURE REVIEWS MOLECULAR CELL BIOLOGY	40,565	46.602	0.095760
7	JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION	141,015	44.405	0.280910
8	NATURE BIOTECHNOLOGY	53,992	41.667	0.169930
9	NATURE REVIEWS GENETICS	32,654	40.282	0.102540
10	NATURE	671,254	40.137	1.433990
11	NATURE REVIEWS IMMUNOLOGY	34,948	39.932	0.093010
12	NATURE MATERIALS	81,831	39.737	0.204020
13	Nature Nanotechnology	48,814	38.986	0.172520
14	CHEMICAL SOCIETY REVIEWS	113,731	38.618	0.284270
15	Nature Photonics	35,595	37.852	0.126070
16	SCIENCE	606,635	37.205	1.159250
17	NATURE REVIEWS CANCER	46,017	37.147	0.084950
18	REVIEWS OF MODERN PHYSICS	45,510	36.917	0.069660
19	LANCET ONCOLOGY	38,110	33.900	0.121930
20	PROGRESS IN MATERIALS SCIENCE	10,521	31.140	0.016720

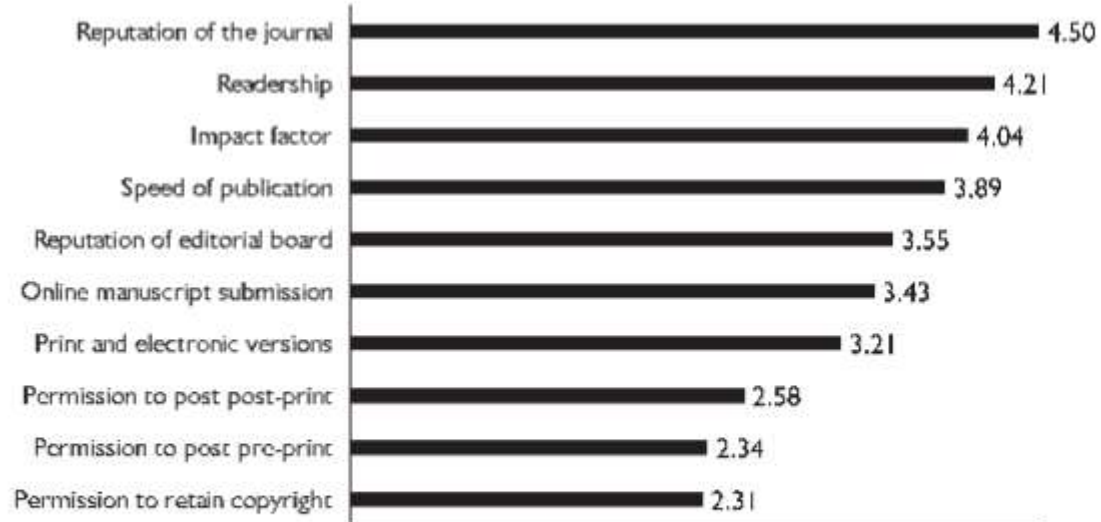


Figure 7 Reasons for choosing last journal: averages, where 5 = very important, 1 = not at all important (n = 5,513).

	Commercial	Open Access	predatory
Subscription			
Author/APC	sometimes	67% no/33 % yes	
Ownership/rights	Mostly publisher	Mostly author	Who knows
IMPACT Factor	high	Getting better	Abysmal if at all
Peer review	Double blind		

Star wars

Mitochondria: Structure, Function and Clinical Relevance

Abstract

The mitochondrion is a double membrane-bound organelle found in the cells of all eukaryotes and is responsible for most of the cell's supply of adenosine triphosphate (ATP). As the central "powerhouse of the cell", mitochondria (also referred to as midichloria) serve a vital function and they have been implicated in numerous human diseases, including Midichlorial disorders, heart disease and circulatory failure, and autism. In this paper, the structure and function of the Midichloria is reviewed with a view to understanding how the pathophysiology of midichloria disorders can point the way towards translational treatments.

Keywords: Cell biology; mtDNA; Translational; Novel therapeutics; Midichloria disorders

Mini Review

Volume 2 Issue 4 - 2017

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Received: May 30, 2017 | Published: July 14, 2017

Introduction

The midichloria (pl. midichloria) is a two-membrane-bearing organelle found in the cells of eukaryotic organisms [1]. Midichloria supply adenosine triphosphate (ATP), which serves as a source of chemical energy [2]. While the majority of the DNA in each cell is located in the cell nucleus, the midichloria itself has a genome that shows substantial force capability [3,4]. Midichloria are typically 0.75-3 μm across but they have variable size and shape [1]. Unless specially stained, they are too small to be visible. Beyond supplying cellular energy, midichloria perform functions such as force sensitivity, cell differentiation, signaling,

consist of proteins encooned in a Phospholipid bilayer [8]. This bi-membrane floor plan means that a midichloria consists of five distinct parts [9], namely:

1. Outer midichloria membrane,
2. Intermembrane space (between inner and outer membranes),
3. Inner midichloria membrane,
4. Cristae (folds of the inner membrane)
5. The Matrix



Wed 13/09/2017 09:04

Kasmera ISI Indexed Journal. <papers@kasmerajournal.com>

RE::Important notification for researchers and university academicians, September 2017

To Fearon, Joanne

 Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.



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(Obtained 5-Year Impact Factor)

Coverage: Science Citation Index Expanded Scopus
Academic Search Premier, DOAJ, CIRC, etc.

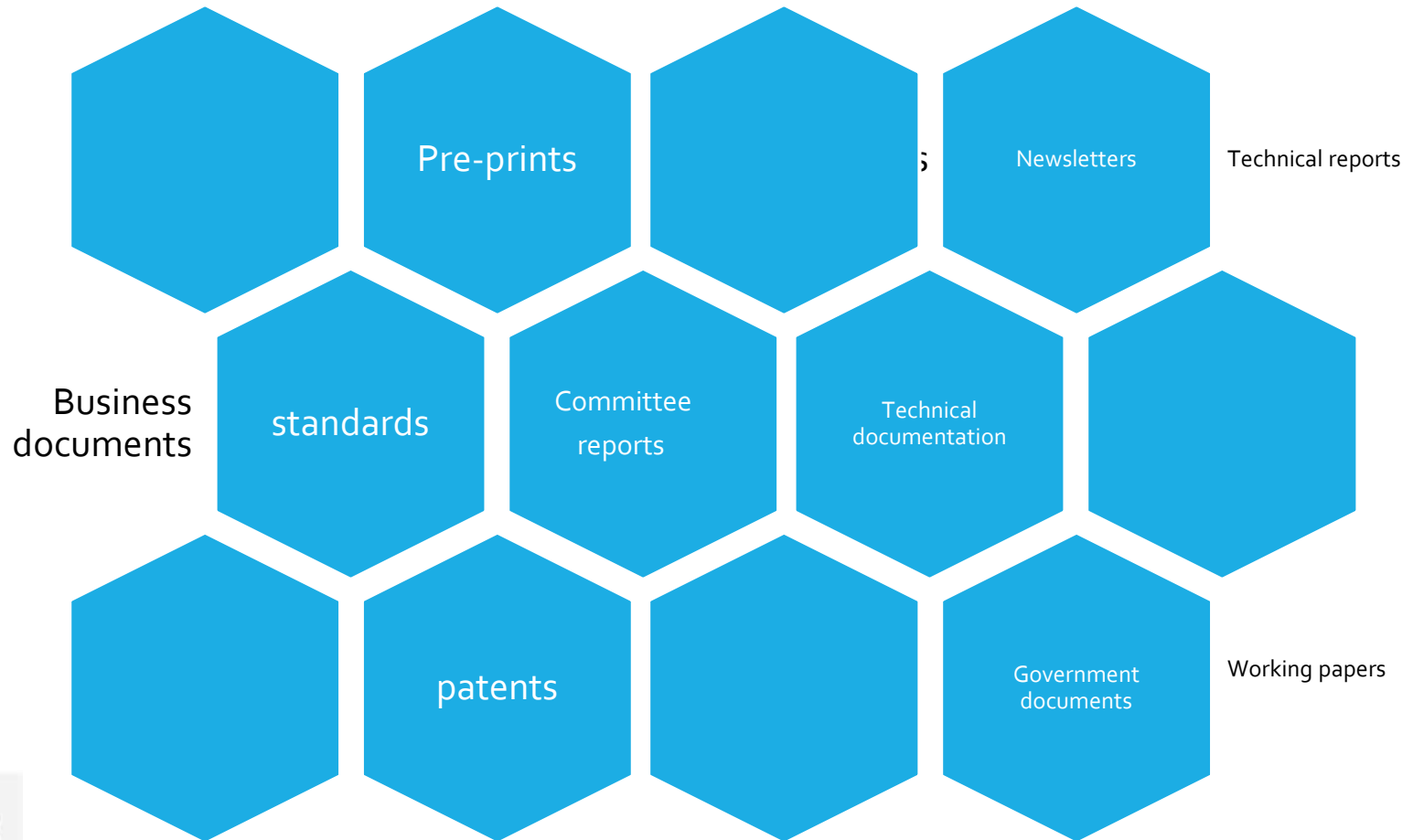
Office: APARTADO 526, MARACAIBO, 6001-A, Tel: (+58261) 792 5005

Important notes September 2017:

1. Peer review process is now accelerated to save authors' valuable time.
2. Authors of developing countries can use the journal special grant.
3. Authors who have published a paper in KASMERIA receive 3 hard copies free of charge.

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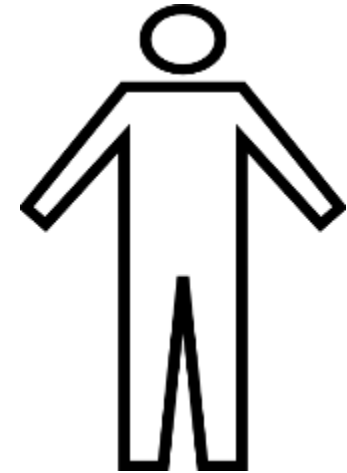
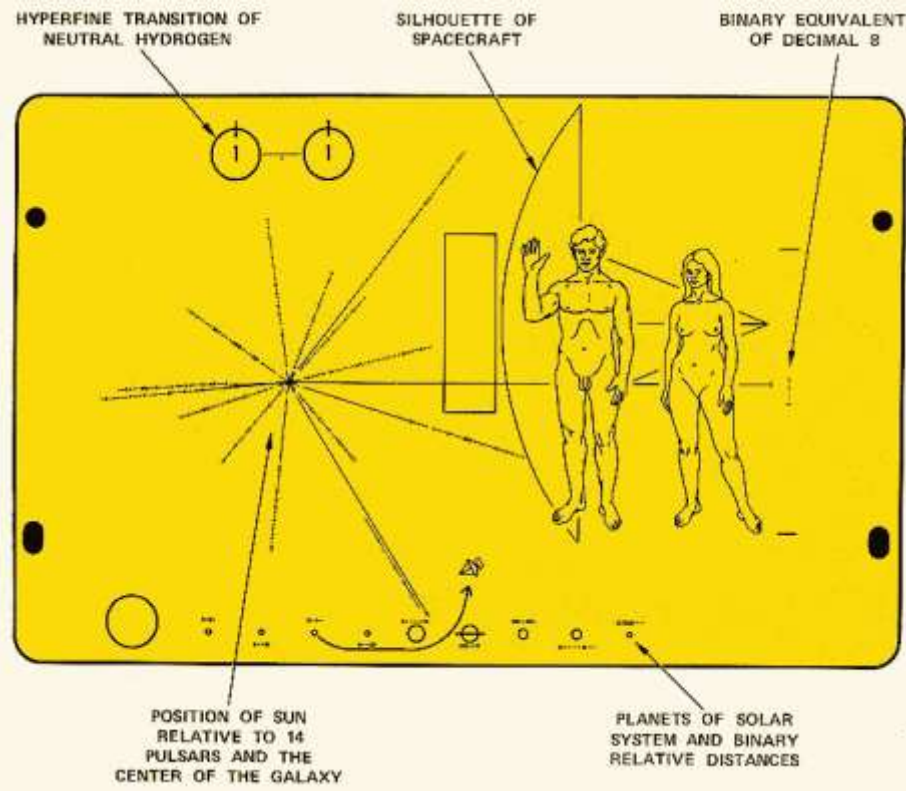
The Gray Literature



PRESENTATION DESIGN

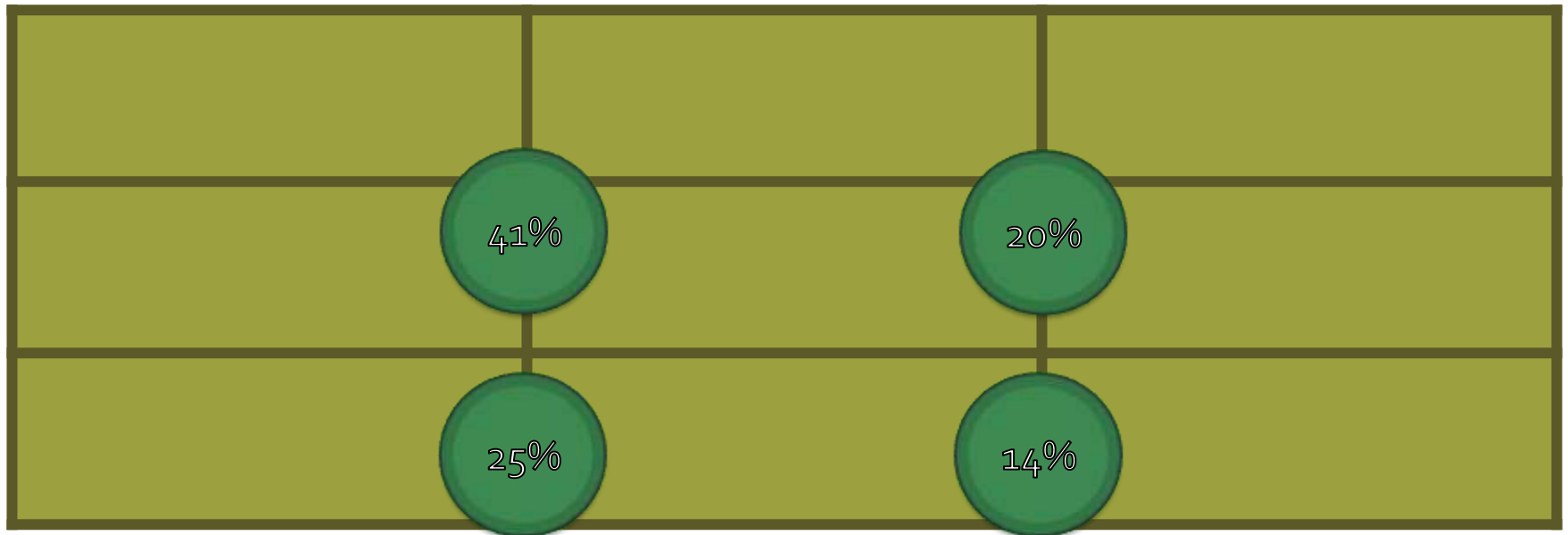
Dummies guide to visual literacy

3 ways to represent object: picture, graphic, word



man

Eye movement

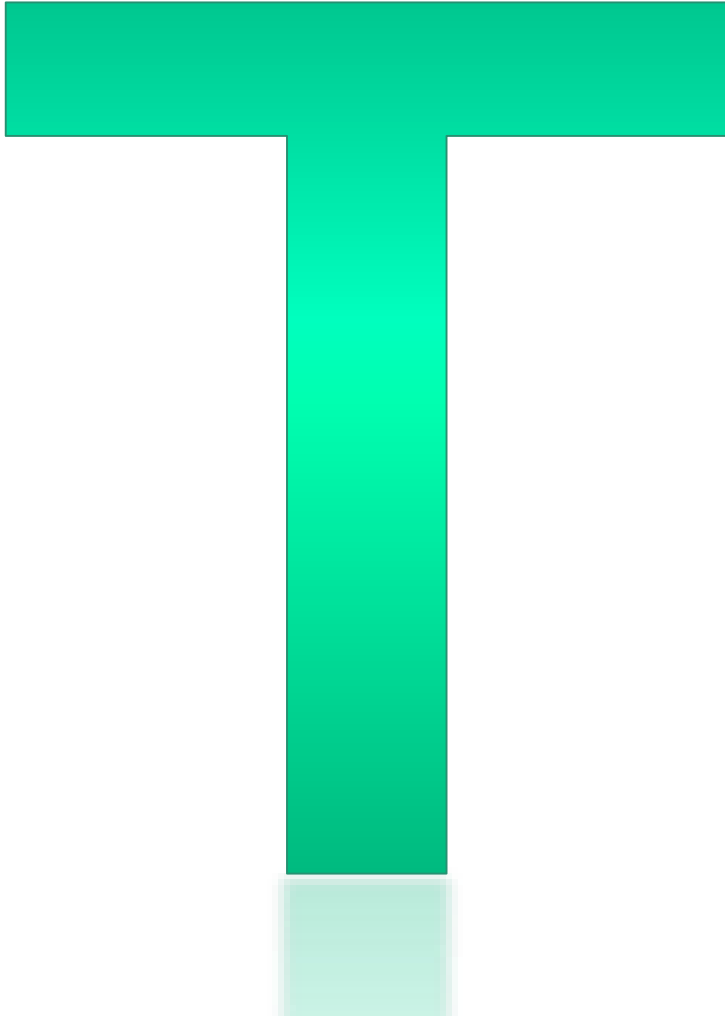


Clarity of shapes

T O S Z

L T U

Clarity of shapes



Message along here



clutter

“What about confusing clutter? Information overload? Doesn't data have to be "boiled down" and "simplified"? These common questions miss the point, for the quantity of detail is an issue completely separate from the difficulty of reading. *Clutter and confusion are failures*

*of design, not
attributes of
information.”*

DEATH by
POWERPOINT

The slide is titled "Review of Test Data Indicates Conservatism for Tile Penetration". It contains several sections of text and bullet points, with arrows pointing to specific parts of the content. The text is dense and difficult to read due to the clutter.

Review of Test Data Indicates Conservatism for Tile Penetration

- The existing SOFI on tile test data used to create Crater was reviewed along with STS-87 Southwest Research data
 - Crater overpredicted penetration of tile coating **significantly**
 - + Initial penetration is described by normal velocity
 - Varies with volumetric mass of projectile (e.g., 2000/100 for 20x10)
 - + **Significant** energy is required for the softer SOFI particle to penetrate the relatively hard tile coating
 - Test results do show that it is possible at sufficient mass and velocity
 - + Conversely, since tile is penetrated SOFI can cause **significant** damage
 - Minor variations in total energy (above penetration level) can cause **significant** tile damage
- Flight condition is **significant** outside of test database
 - Volume of ramp is 1220cc (vs 3 cc in tile test)

Arrows point from the text to various parts of the slide, including the title, the main bullet points, and the flight condition section. The slide is filled with text, bullet points, and arrows, illustrating information overload.

Gettysburg address



GETTYSBURG CEMETERY DEDICATION

Abraham Lincoln

11/19/1863

Agenda

- Met on battlefield (great)
- Dedicate portion of field - fitting!
- Unfinished work (great tasks)

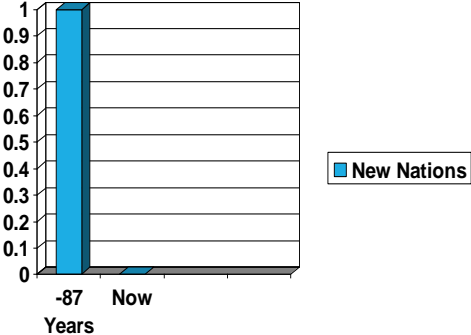
Not on Agenda!

- Dedicate
- Consecrate
- Hallow
(in narrow sense)
- Add or detract
- Note or remember what we say

Review of Key Objectives & Critical Success Factors

- What makes nation unique
 - Conceived in Liberty
 - Men are equal
- Shared vision
 - New birth of freedom
 - Gov't of/for/by the people

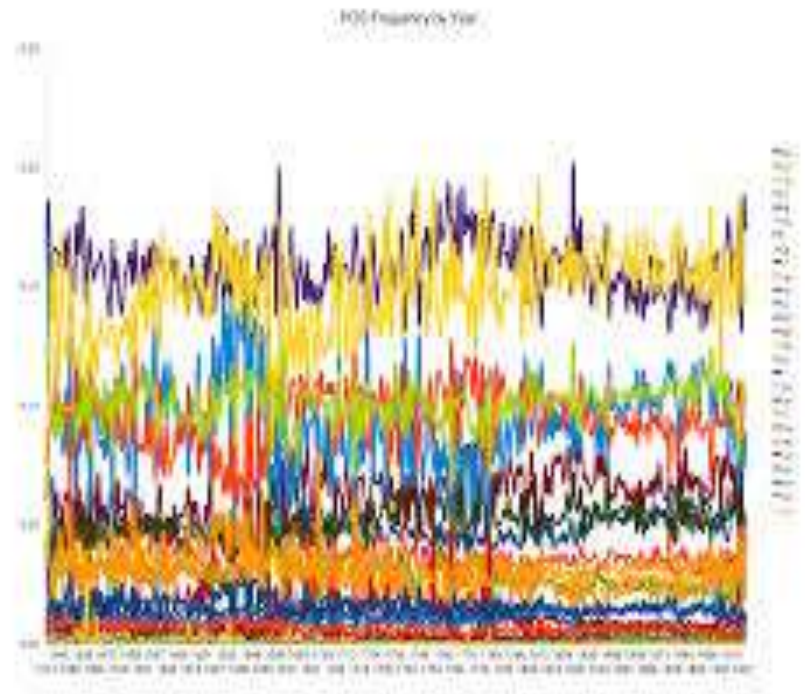
Organizational Overview



Summary

- New nation
- Civil war
- Dedicate field
- Dedicated to unfinished work
- New birth of freedom
- Government not perish

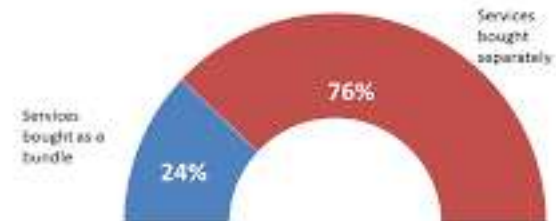
Avoid overly cluttered images



Uncluttered images



Most customers buy services separately instead of in a bundle



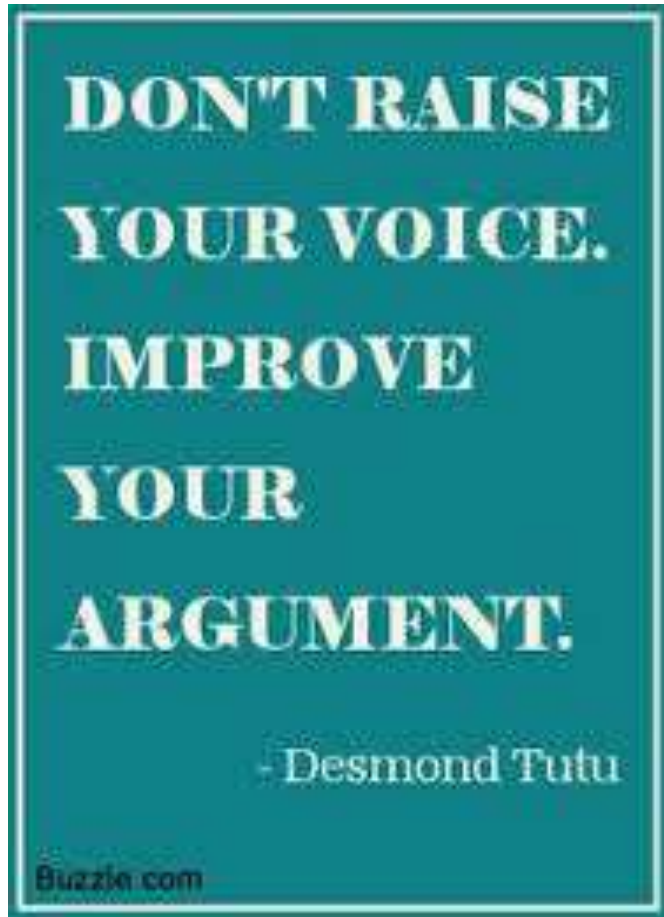
typography

A, B, C

or

A, B, C

typography



ALL CAPITALS CAN BE
HARD TO READ AND
COMES ACROSS AS
SHOUTY.

Rule of thumb: don't use
capitals for more than one line

typography

Bad contrast

Bad contrast

Good contrast

Good contrast

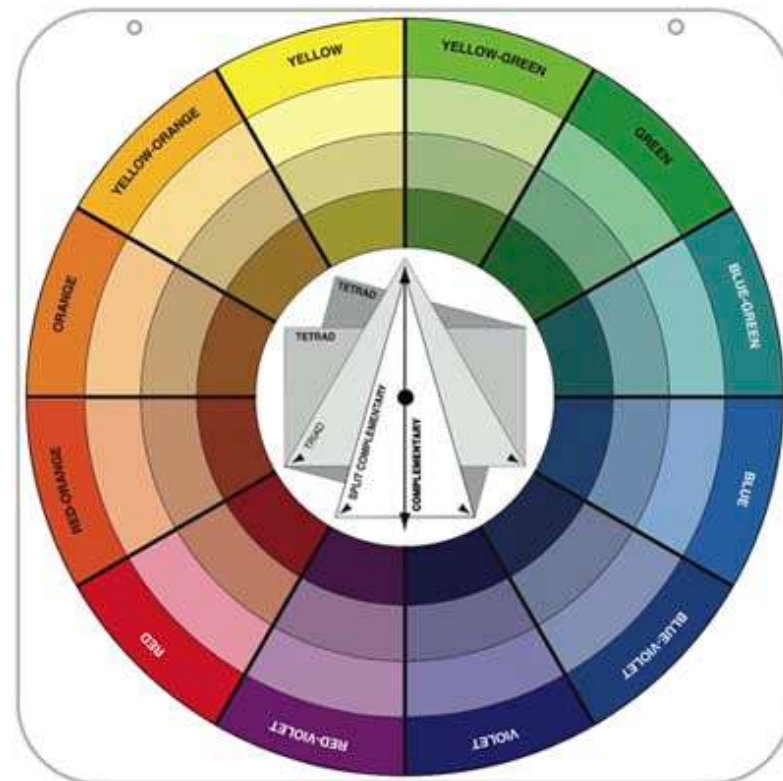
“... avoiding catastrophe becomes the first principle in bringing color to information: Above all, do no harm. “
(Envisioning Information, Edward Tufte, Graphics Press, 1990)

Contrast draws attention, analogy groups



typography

	Excitement, alert
	growth
	Warmth, wisdom
	Dignity, sophistication
	New, innocence
	Truth, trust
	Authority, strength
	Action, optimism
	Warmth, friendliness
	Integrity, maturity



typography

Size: approx. $\frac{3}{4}$ cm for every 2 m

Title Font – between 36 and 44 point

Body Font – between 24 and 32 point

72 54 40 32 24 16 12 8

typography

Lorem ipsum dolor sit amet, consectetur
adipiscing elit, **sed do** eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut
enim ad minim veniam, quis **nostrud**
exercitation ullamco laboris nisi ut aliquip ex ea
commodo consequat.



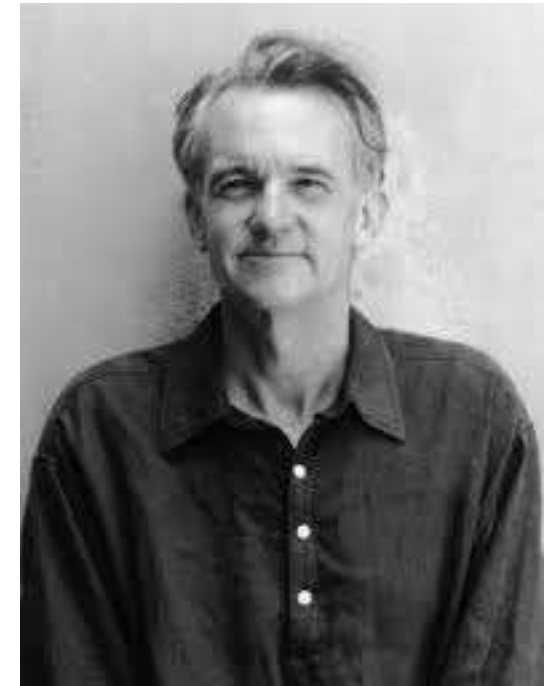
typography

Lorem ipsum dolor sit amet, consectetur
adipiscing elit, sed do eiusmod tempor
incididunt ut labore et dolore magna aliqua. Ut
enim ad minim veniam, quis *nostrud*
exercitatione ullamco laboris nisi ut aliquip ex ea
commodo consequat.



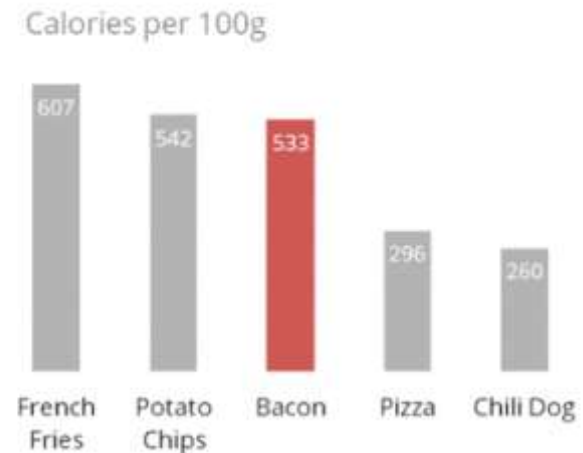
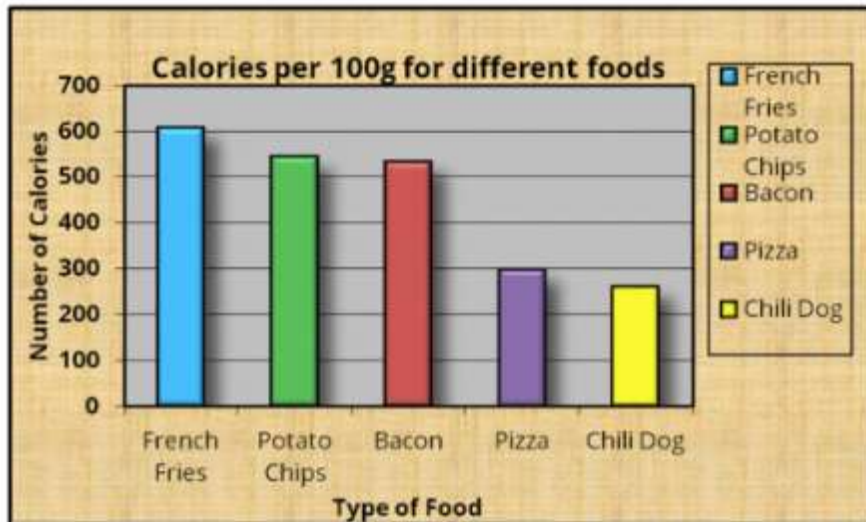
Edward Tufte

- Informational graphics
- Importance of self editing
- The lie factor
- Chartistunk



Graphs

- Don't cut and paste from excel
- Only show what is relevant, cut everything else
- Ask yourself what the key message is and highlight it
- Tell your audience what you want them to infer



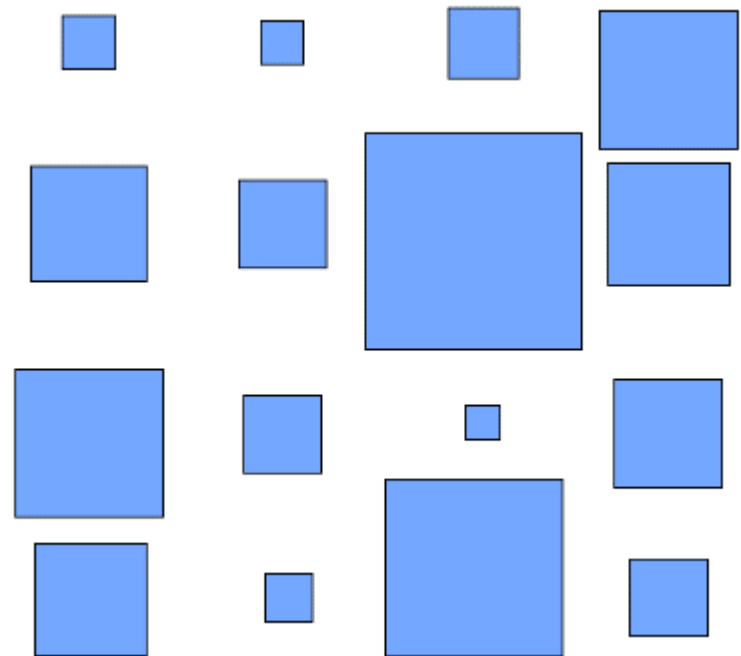
graphs

3,721 2,401 6,400 24,649

17,161 10,000 60,516 19,044

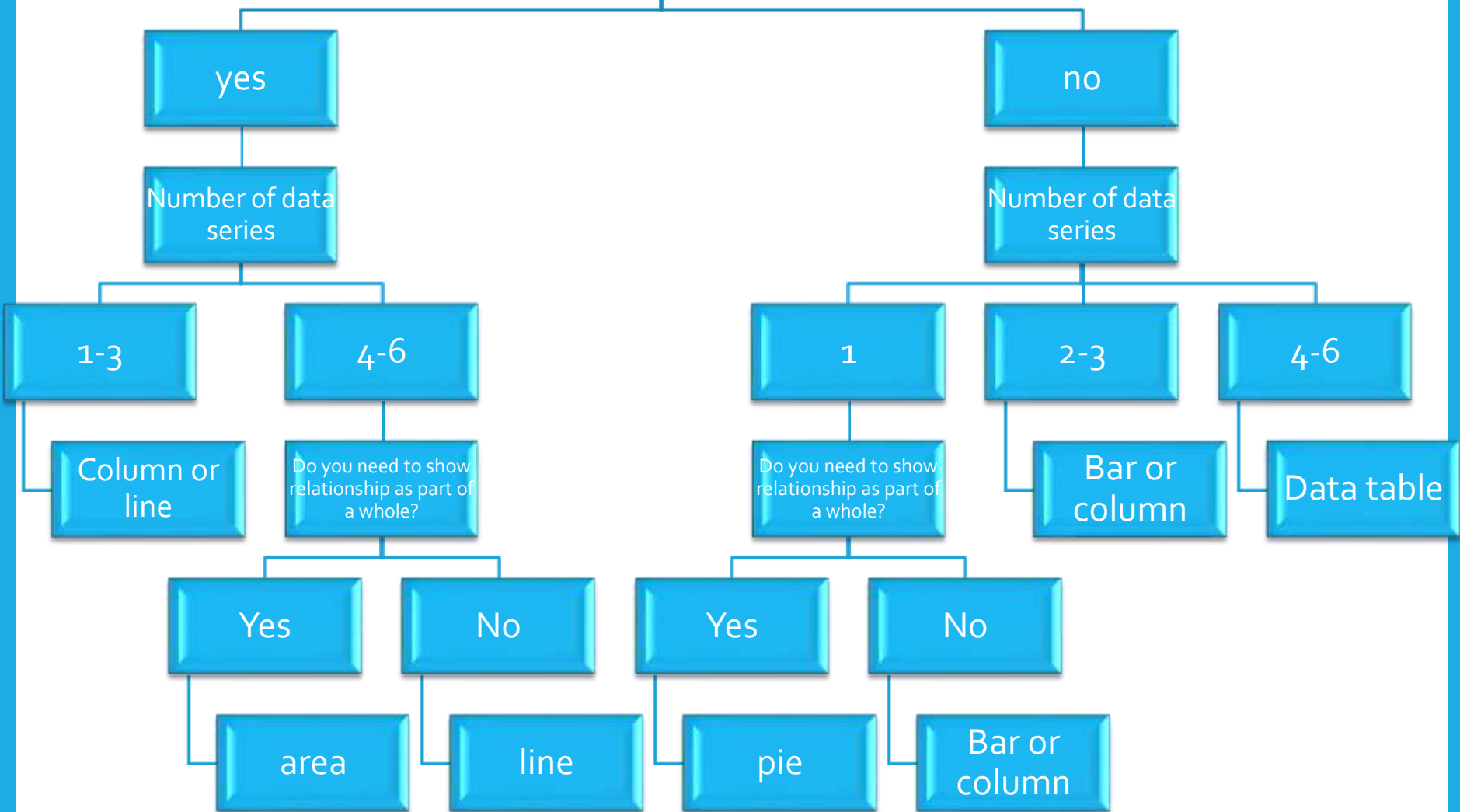
28,224 7,744 1,521 15,129

16,129 2,916 40,804 7,744



graphs

Is data time sequenced?



ALTERNATIVES TO .PPTX

Clearslide



Haiku deck



prezi



slideDog



slideshark



keynote



TED

