

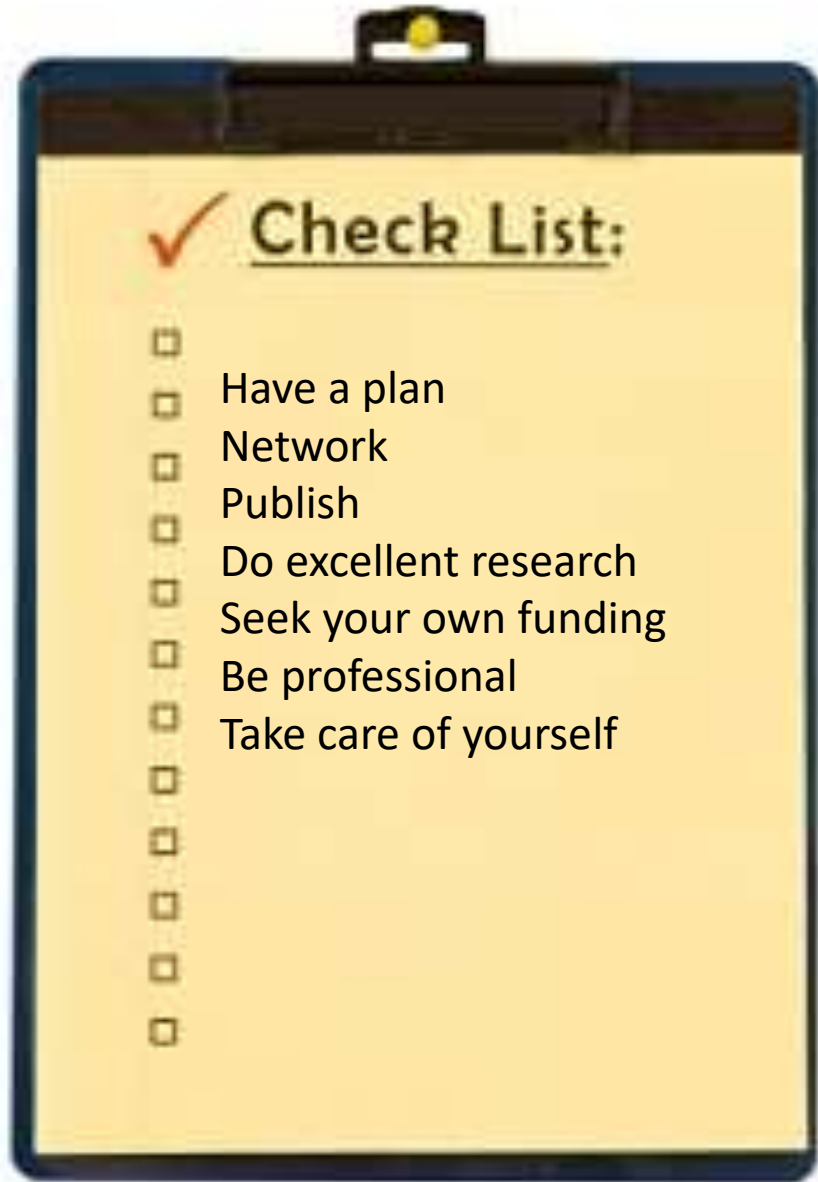
Personal Effectiveness

Joanne Fearon

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086 3840587

The successful researcher checklist



Post-docs, Complex relationship – independent but joined to PI/project

Independent researcher – plan and carry out work, analyse results, publish, keep up to date, perhaps outreach....





A word cloud of phrases related to time management and procrastination. The words are arranged in a circular pattern, with some words appearing multiple times. The phrases include:

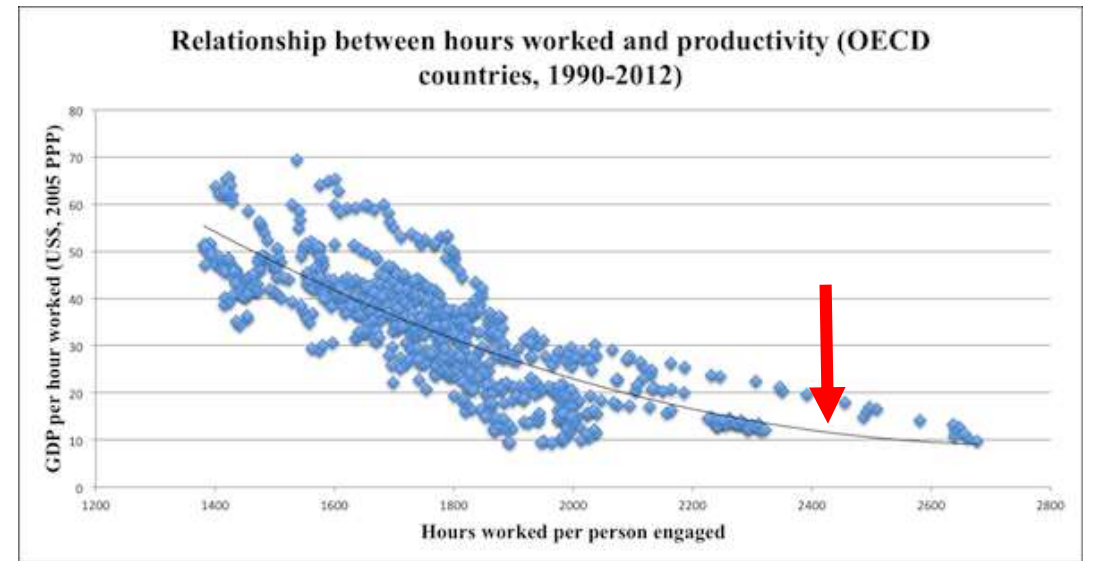
- FOR ME CAN
- YOU DON'T FEEL LIKE
- YOU'RE TIRING
- YOU'RE BUSY
- YOU'RE PROcrastinating
- YOU'RE WASTING TIME
- YOU'RE NOT WORKING
- YOU'RE NOT DOING
- YOU'RE NOT TRYING
- YOU'RE NOT GOING
- YOU'RE NOT STARTING
- YOU'RE NOT FINISHING
- YOU'RE NOT COMPLETING
- YOU'RE NOT MOVING FORWARD
- YOU'RE NOT MAKING PROGRESS
- YOU'RE NOT GETTING ANYWHERE
- YOU'RE NOT BEING PRODUCTIVE
- YOU'RE NOT BEING EFFICIENT
- YOU'RE NOT BEING ORGANIZED
- YOU'RE NOT BEING RESPONSIBLE
- YOU'RE NOT BEING ACCOUNTABLE
- YOU'RE NOT BEING COMMITTED
- YOU'RE NOT BEING DEDICATED
- YOU'RE NOT BEING PASSIONATE
- YOU'RE NOT BEING MOTIVATED
- YOU'RE NOT BEING ENTHUSIASTIC
- YOU'RE NOT BEING POSITIVE
- YOU'RE NOT BEING OPTIMISTIC
- YOU'RE NOT BEING CONFIDENT
- YOU'RE NOT BEING ASSERTIVE
- YOU'RE NOT BEING BOLD
- YOU'RE NOT BEING BRAVE
- YOU'RE NOT BEING COURAGEOUS
- YOU'RE NOT BEING DETERMINED
- YOU'RE NOT BEING RESILIENT
- YOU'RE NOT BEING PERSISTENT
- YOU'RE NOT BEING PERSEVERANT
- YOU'RE NOT BEING COMMITTED
- YOU'RE NOT BEING DEDICATED
- YOU'RE NOT BEING PASSIONATE
- YOU'RE NOT BEING MOTIVATED
- YOU'RE NOT BEING ENTHUSIASTIC
- YOU'RE NOT BEING POSITIVE
- YOU'RE NOT BEING OPTIMISTIC
- YOU'RE NOT BEING CONFIDENT
- YOU'RE NOT BEING ASSERTIVE
- YOU'RE NOT BEING BOLD
- YOU'RE NOT BEING BRAVE
- YOU'RE NOT BEING COURAGEOUS
- YOU'RE NOT BEING DETERMINED
- YOU'RE NOT BEING RESILIENT
- YOU'RE NOT BEING PERSISTENT
- YOU'RE NOT BEING PERSEVERANT

Time Management for researchers/academics

“Time is a created thing. To say 'I don't have time,' is like saying, 'I don't want to.'”

— Laozi, 李耳,

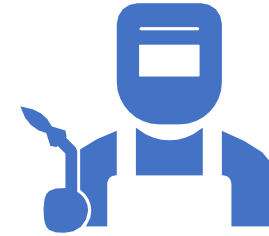
Some statistics



Science post-docs work an average of 51 hours a week

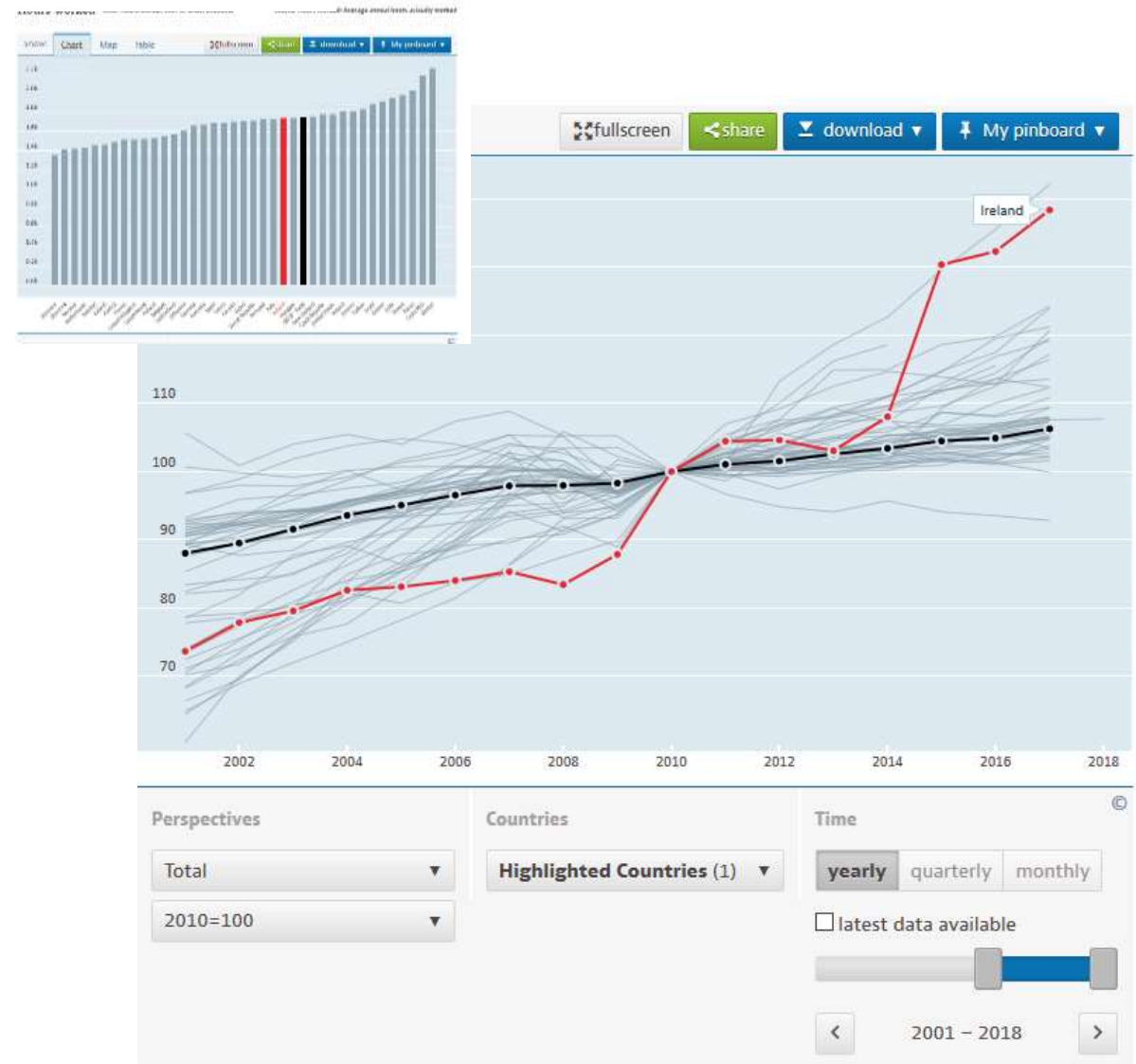
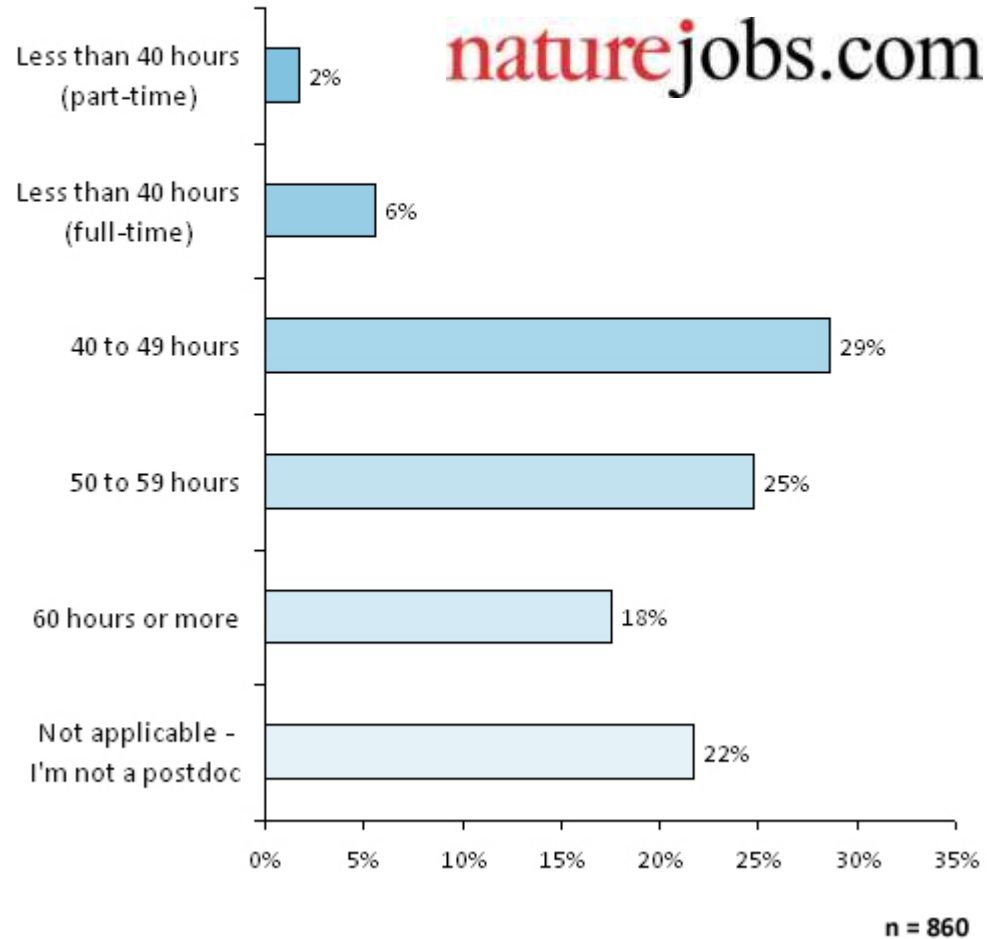


€12.48/hr,
Trend it to rising hours,
Typically work longer hours out of term time (+7hrs)



Henry Ford, Construction CEOs – 8 hr/day, Knowledge workers (wall street)? Year 1 ✓, year 4 X

Postdocs: how many hours do you work per week?



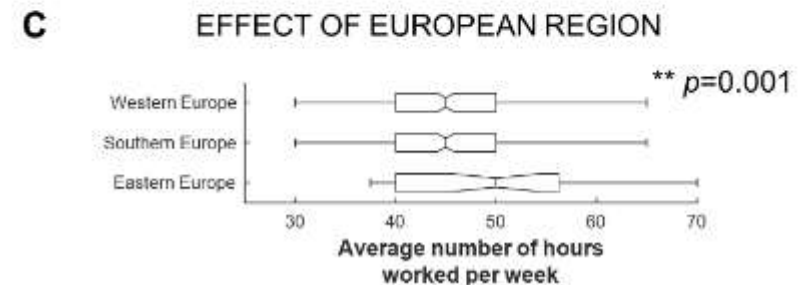
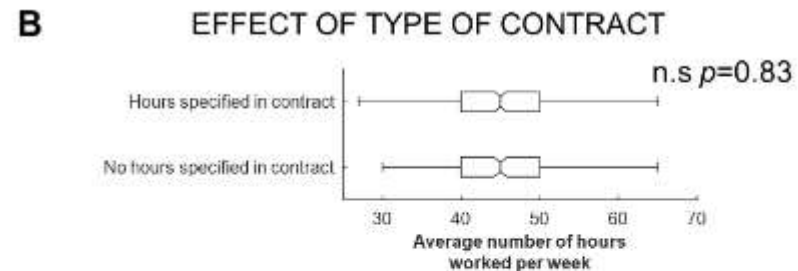
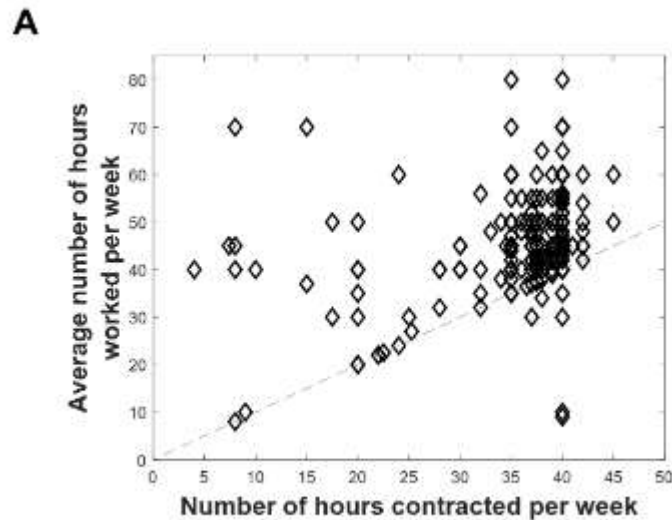
EU data

<https://www.nature.com/articles/d41586-019-00688-8>

<https://www.biorxiv.org/content/biorxiv/early/2019/01/23/523621.full.pdf>



"Now will everybody please turn to page 5 of the hidden agenda."



Improving time usage



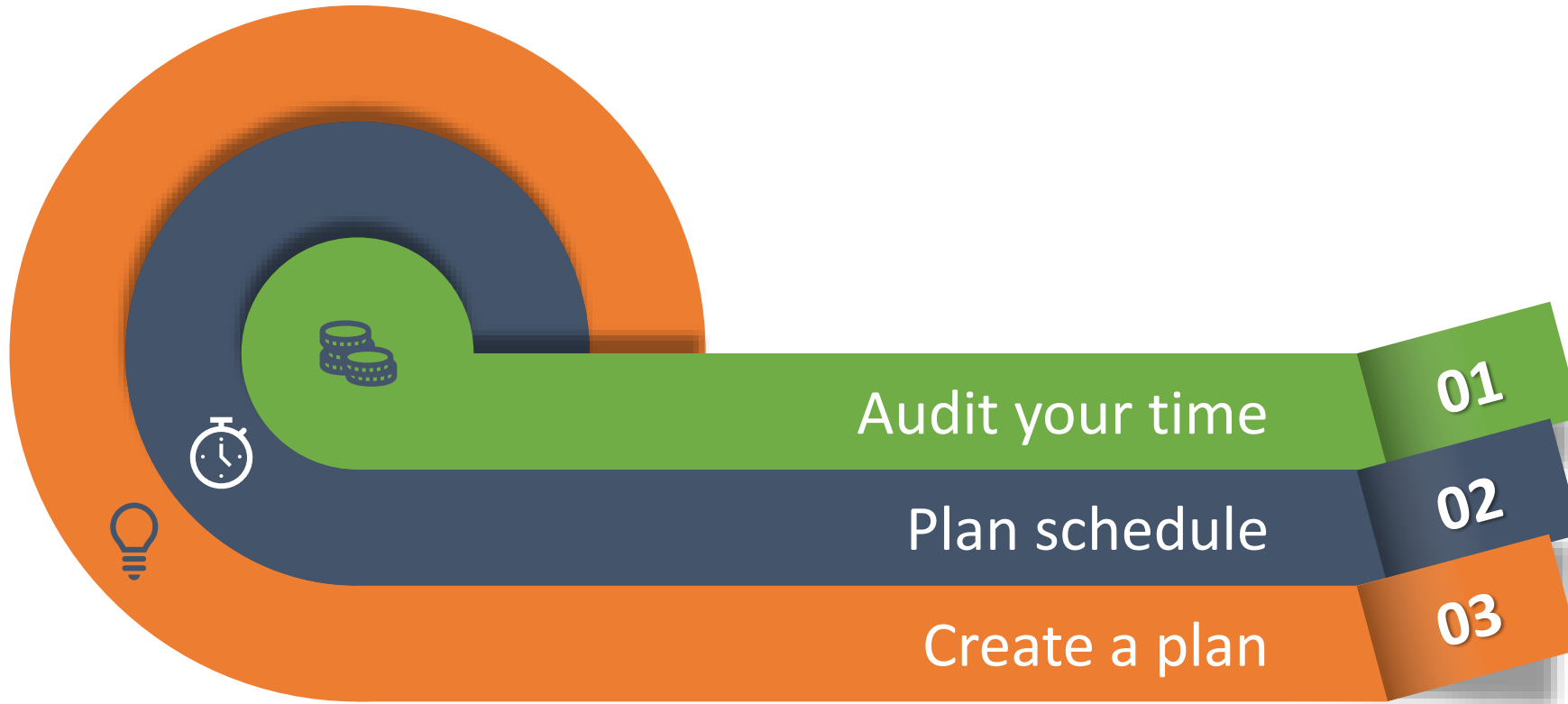
1. You want to get a current activity completed in less time.

or



2. You want to replace a current activity with a new one.

3 steps to improving time management



Benjamin Franklin

What good have I done today?

The morning question, What good shall I do this day?	5	Rise, wash, and address <i>Powerful Goodness</i> ; contrive day's business and take the resolution of the day; prosecute the present study; and breakfast.
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	1	
	2	
Evening question, What good have I done today?	3	Work.
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	1	Put things in their places, supper, music, or diversion, or conversation; examination of the day.
	2	
	3	
	4	
	1	Sleep.
	2	
	3	
	4	

Benjamin Franklin's Schedule	
12:00 - 5:00 am	Sleep
5:00 - 8:00	Rise, wash, and address powerful goodness; contrive today's business and take resolution of the day; prosecute the current study; and breakfast
8:00 - 12:00 pm	Work
12:00 - 2:00	Read or overlook my accounts and dine.
2:00 - 6:00	Work
6:00 - 10:00 pm	Put things in their places, supper, music, or diversion, or conversation; examination of the day.
10:00 - 12:00 am	Sleep

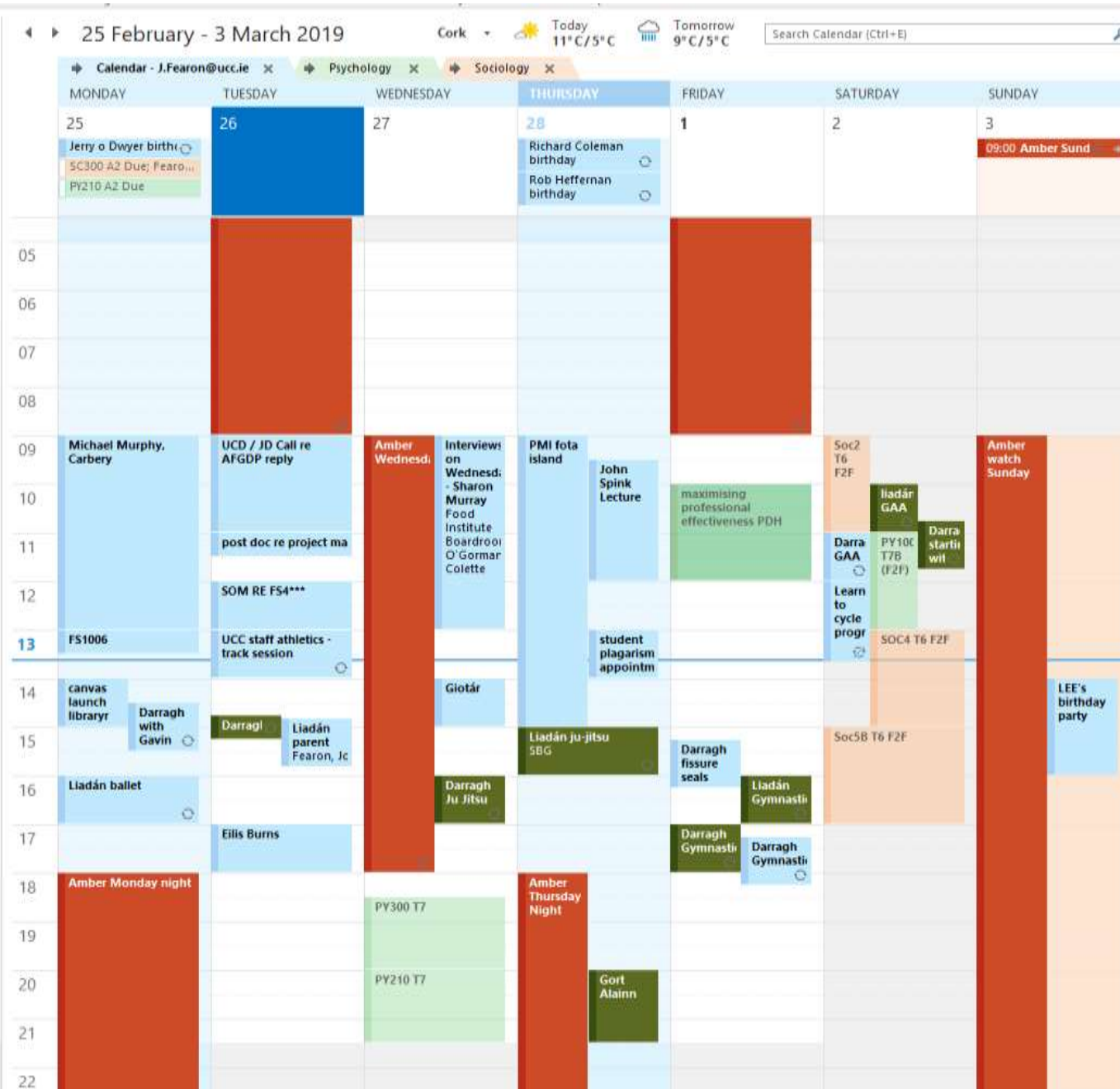
Benjamin Franklin's Schedule	
12:00 - 5:00 am	Sleep
5:00 - 5:10	Rise and address powerful goodness (answer, "What good shall I do today?")
5:10 - 5:30	Wash and dress
5:30 - 7:15	Contrive today's business and take resolution of the day; prosecute the current study
7:15 - 7:30	Breakfast
7:30 - 8:00	Commute
8:00 - 12:00 pm	Work
12:00 - 12:30	Dine
12:30 - 2:00	Read or overlook my accounts
2:00 - 6:00	Work
6:00 - 6:30	Commute
6:30 - 6:45	Put things in their places
6:45 - 7:30	Supper
7:30 - 9:45	Music, or diversion, or conversation; examination of the day.
9:45 - 10:00 pm	Brush teeth and get ready for bed
10:00 - 12:00 am	Sleep

168

Don't think in 24 hour blocks. Consider your time as a week. Anything you devote time to at least once a week is important

Do a time audit

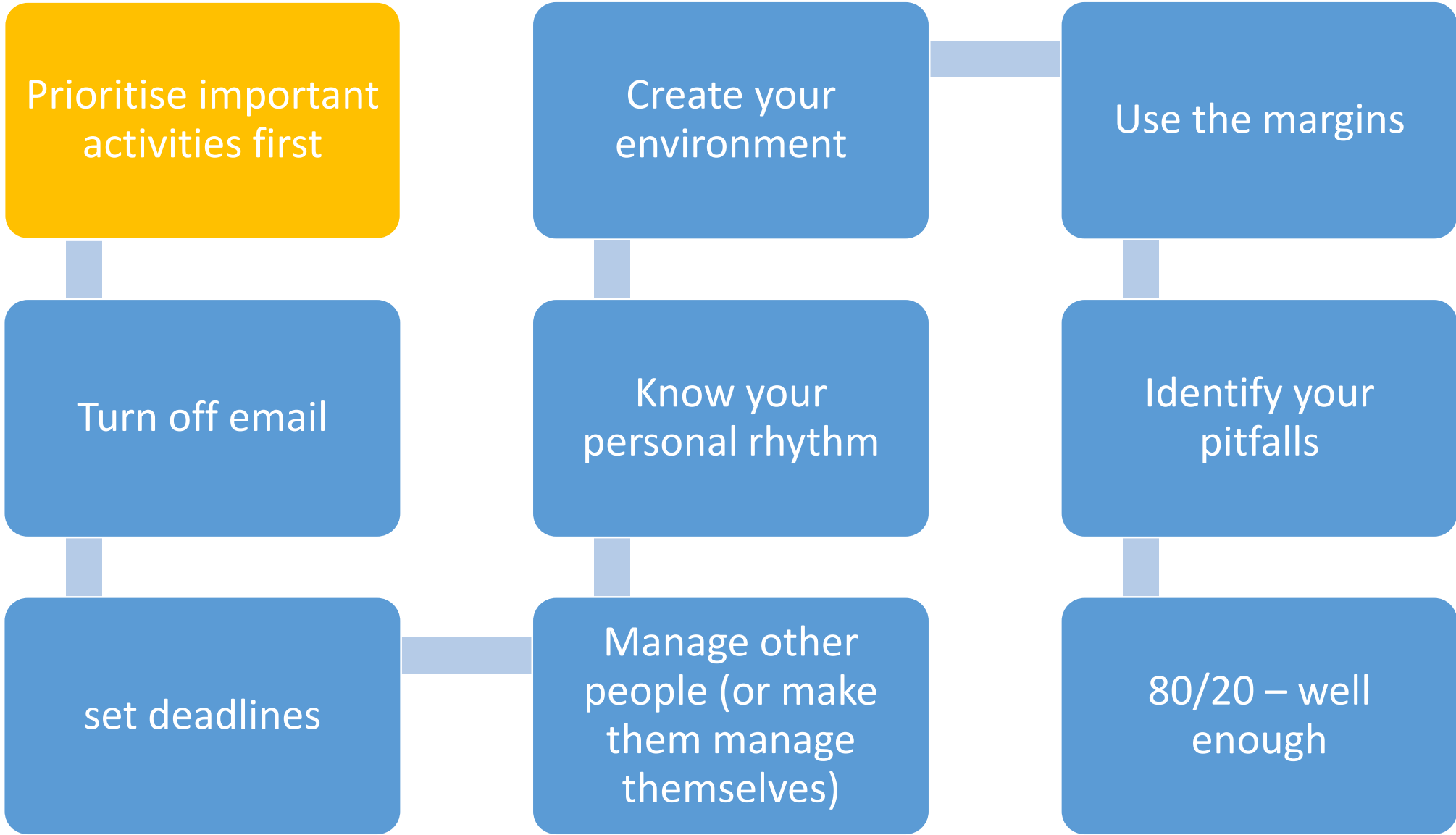
- Set a timer and write down what you are doing every time the timer goes off



What time is locked in?

Sleep	7 hr
Eat	1:30 hr
Hygiene	:30 hr
Caring duties	? hr
Commuting	1 hr

Can you use this time more productively?



The time management formula

Productivity = k(time)(efficiency)

Jo Fearon's effectiveness formula

effectiveness = k(productivity)(prioritisation)

So what tools can we use?

to do lists, action plans, Covey, Allen, Crillo

prioritisation

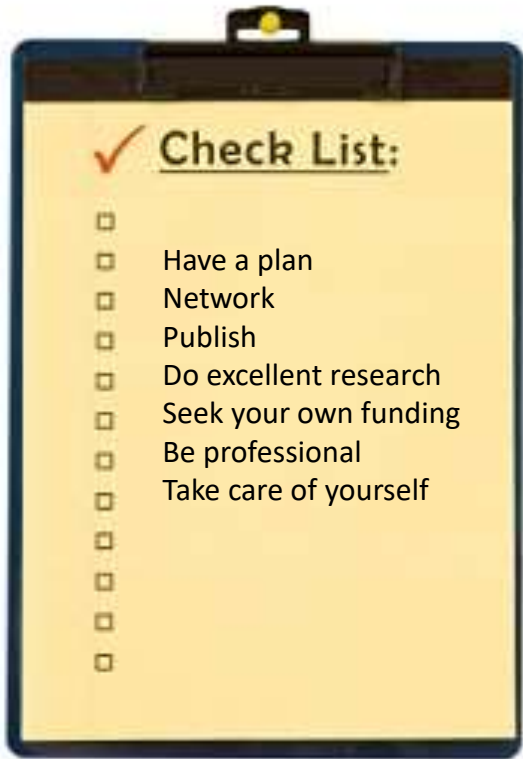
Making the best use of your time and resources



What are your priorities?

Prioritisation techniques

Paired comparison analysis



Paired Comparison Analysis

Used for unclear goals/priorities where there are many options or very different options

Works out the relative importance of different options

Where there is little objective data to base decision on

When alternatives are different/distinct

Choosing a school for my kid

	A: CAO points	B: sporting tradition	C: social /ASD	D: distance from home	E:language	F:ethos	G: Fees
A: CAO points		A,1	A,1	A,3	A,3	A,3	A,3
B: sporting tradition			C,1	B,2	B,1	B3	B3
C: social /ASD				C,3	C,2	C,3	C,2
D: distance from home					D,1	D,1	D,3
E:language						E,2	E,1
F:ethos							G,1
G: Fees							

Choosing a school for my kid

Choosing a school for my kid

	A: CAO points	B: sporting tradition	C: social /ASD	D: distance from home	E: language	F: ethos	G: Fees
A: CAO points		A,1	A,1	A,3	A,3	A,3	A,3
B: sporting tradition			C,1	B,2	B,1	B3	B3
C: social /ASD				C,3	C,2	C,3	C,2
D: distance from home					D,1	D,1	D,3
E: language						E,2	E,1
F: ethos							G,1
G: Fees							

A: CAO points	14
B: sporting	9
C: social/ASD	11
D: distance	5
E: language	2
F: ethos	0
G: fees	1

	■						
	■	■					
	■	■	■				
	■	■	■	■			
	■	■	■	■	■		
	■	■	■	■	■	■	
	■	■	■	■	■	■	■

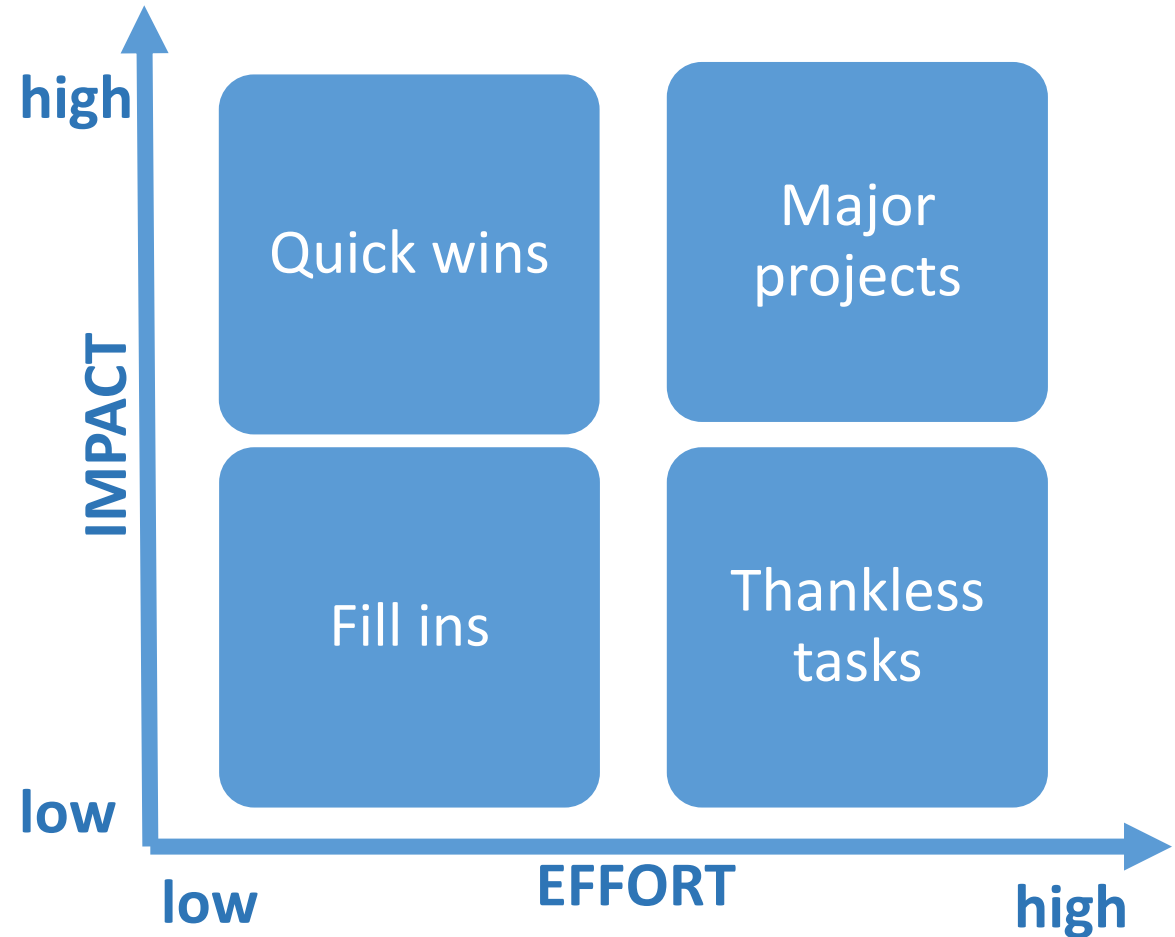
- A: chair a committee
- B: gain professional membership
- C: 1st author on next publication
- D: get a (travel) grant
- E: increase salary
- F: improve H index by 5
- G: invited to speak internationally

Six sigma tool: Action priority matrices

When your wish list exceeds your available time

Identifies the order to get the most important things done first

Good for big picture priorities



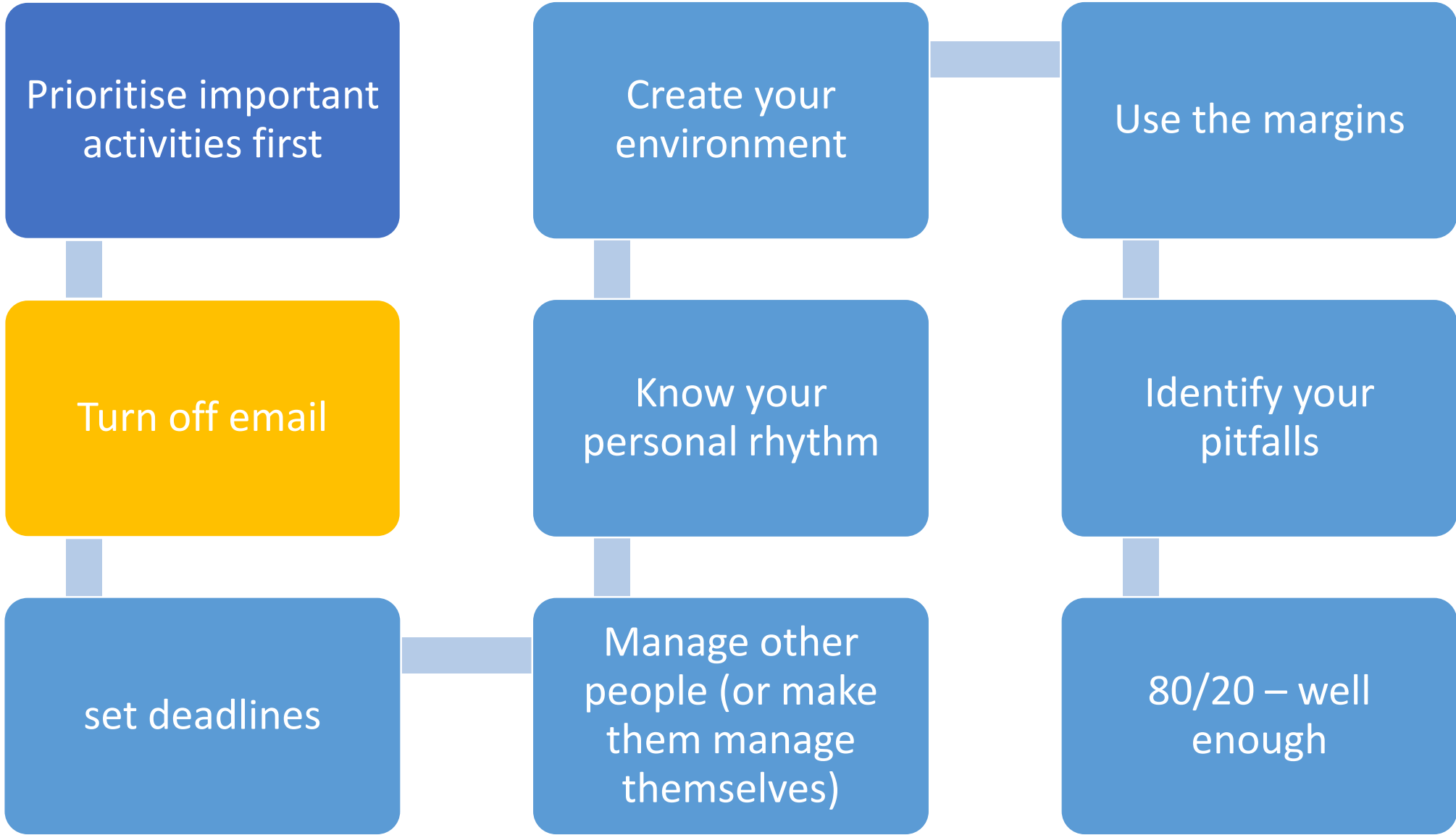
Related technique:

Johari window (self knowledge)

Eisenhower matrix (4Ds)

Ansoff matrix (risk)

Boston matrix (ROI)



email

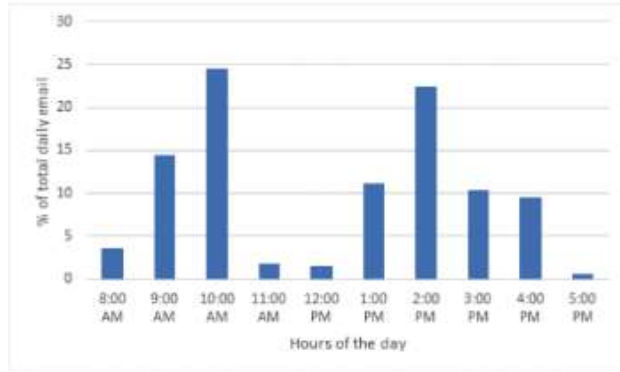


Figure 1a. Data of a user who batches email use. Y-axis shows percentage of daily email done in that hour

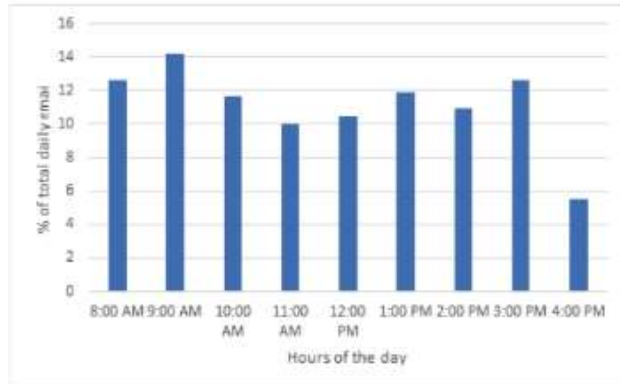


Figure 1b. Data of a user who consistently checks email.

Measure	Description
Email duration	The proportion of seconds spent daily/hourly on email compared to total computer duration
Email checks	Counts of daily/hourly unique visits to the email client
Interruption type	People's reported preference for external (use of email notifications) or self-interruption for checking email
Batching behavior	Based on the daily distribution of email use, described above
Productivity	Measured in end-of-day survey based on six dimensions using Likert scale; Composite measure created
Stress	Measured by worn heart rate monitors using RMSSD
Control Variables	
Job characteristics	Job demands, job decision latitude from JCQ [21], in general survey
Productivity software	The proportion of seconds spent daily/hourly on productivity software compared to total computer duration
Baseline stress	Perceived Stress Scale [6] in general survey

Table 1. Summary of measures used.

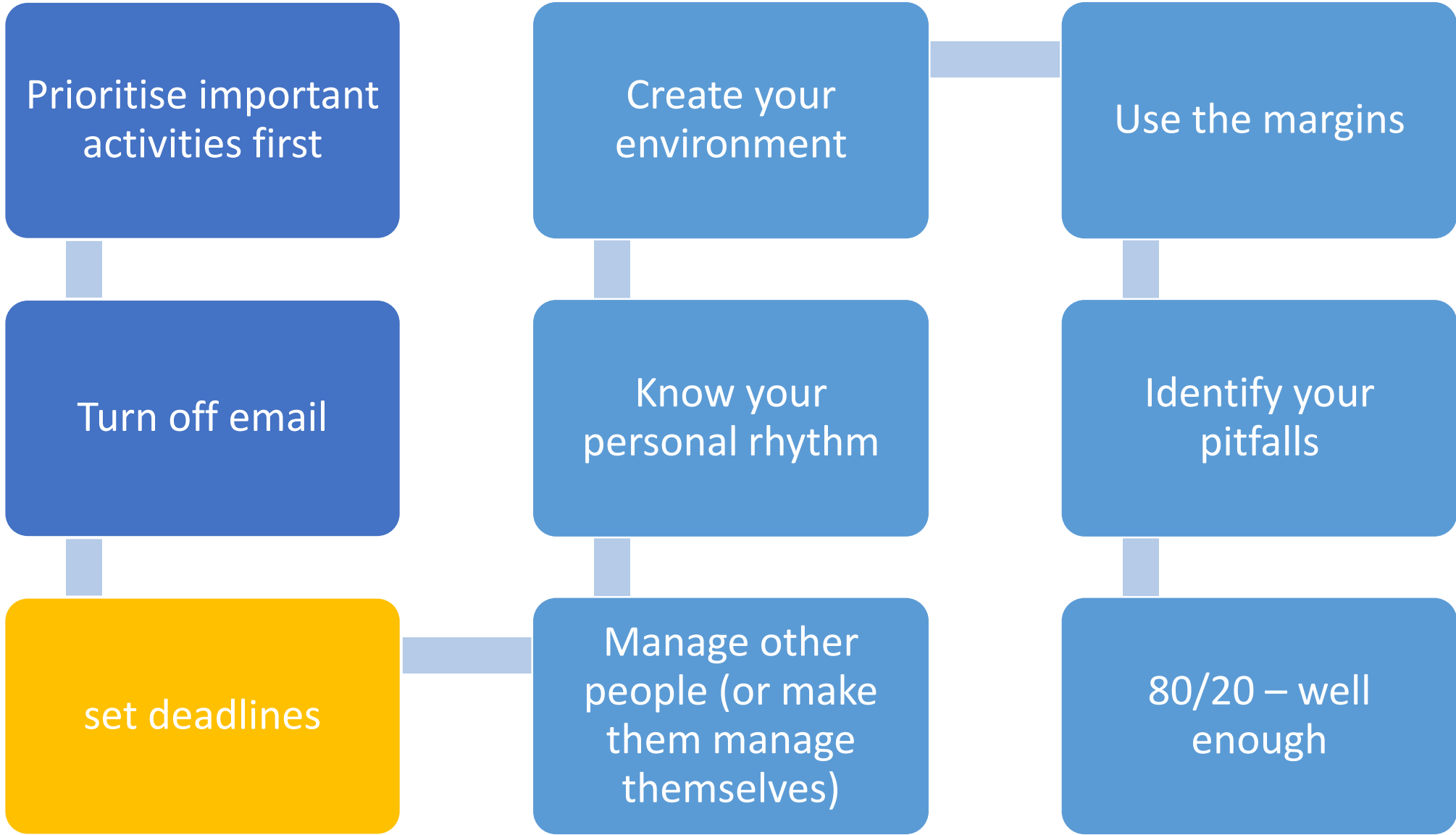
	Mean	SD	Median	Range
Total computer duration	4 hr 34 min	2 hr 23 min	4 hr 28 min	3 min - 13 hr 59 min
Total email duration	1 hr 23 min	40.49 min	1 hr 6 min	0 - 7 hr 54 min
Email checks	77.27	63.52	58.0	1 - 408

Table 2. Daily averages of different computer usage. N=40.

Longer Duration
Productivity ↓
Stress ↑

Self-interruptions
Productivity ↑
Stress –

Batching
Productivity ↑
Stress –

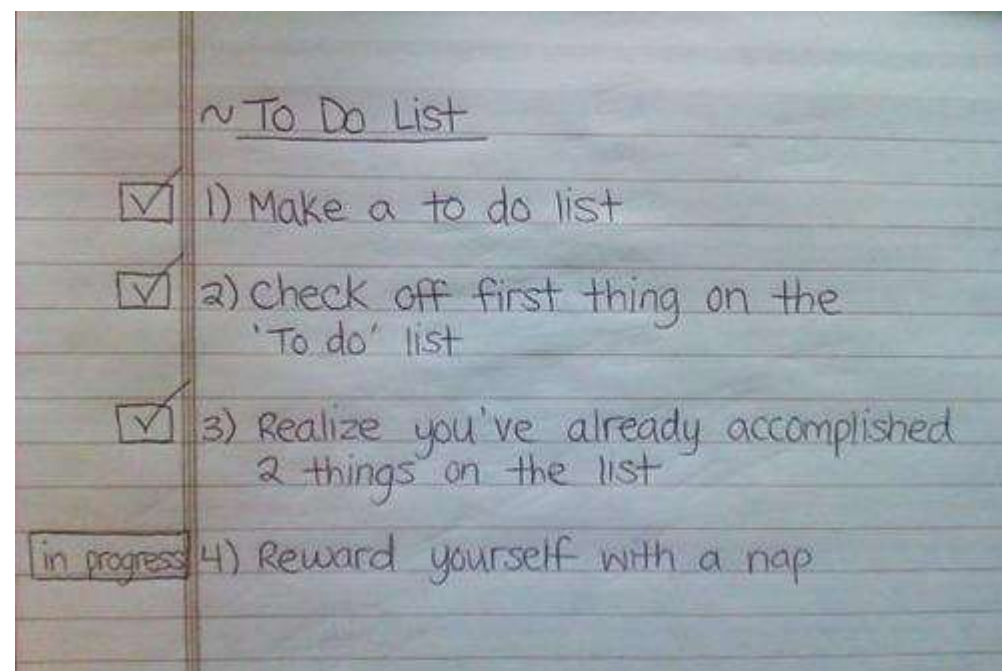


To do lists

- Perfect for little tasks that might otherwise get forgotten
- List is a misnomer – needs organising
- Must be actionable tasks
- Must be prioritised

- Have limits (3 per daily list, 20 overall)

- Some tools
- Microsoft to do
- TickTick (embeds calendars)
- Google Tasks
- Wunderlist (cross platform, my favourite)

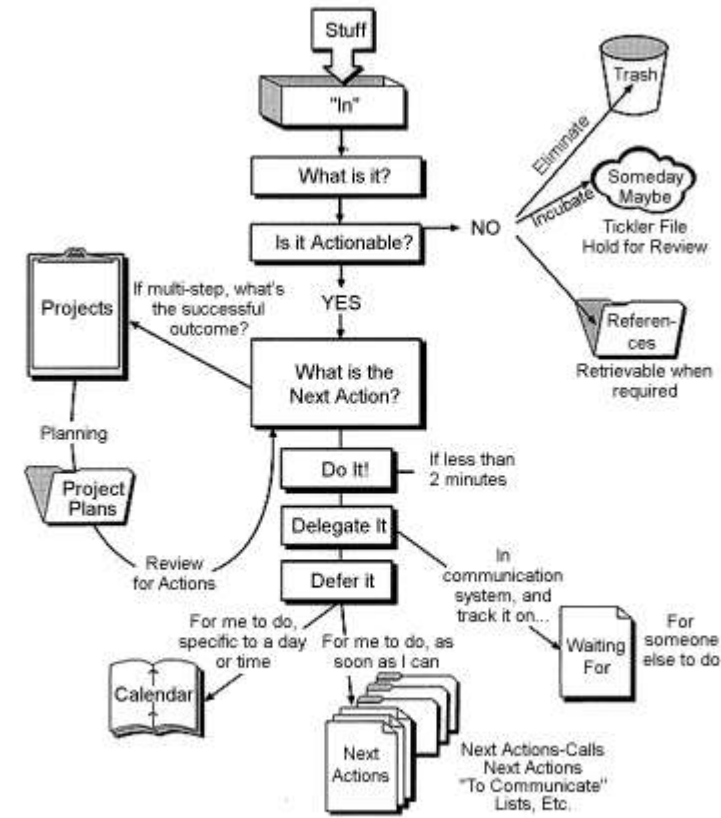
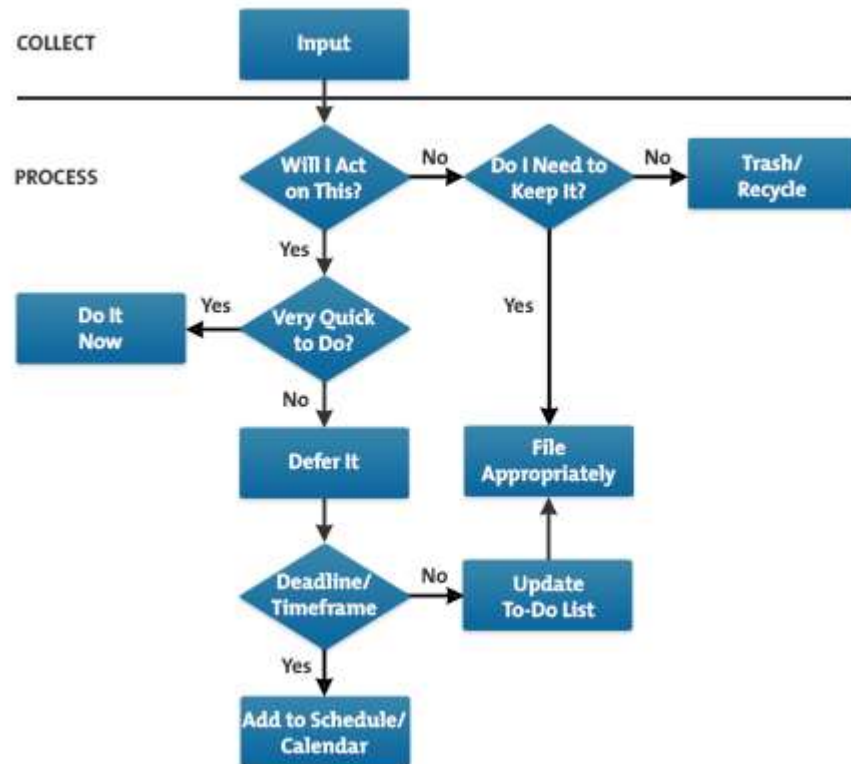


~~To Do lists~~ – Actions Programmes

- Once you start progressing in your career – projects become less linear & you've multiple responsibilities
- Collections
- Pruning
- Organising and prioritising
 - Review and group
 - Prioritise
 - Put into action programme (next lists, delegated lists, project catalog)
- working

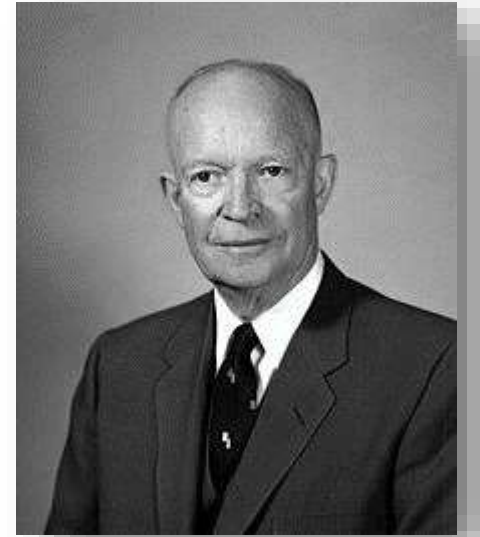
David Allen's Input Processing technique

- Getting things done (2002)



Time management Matrix

	<i>Urgent</i>	<i>Not Urgent</i>
<i>Important</i>	1	2
<i>Not Important</i>	3	4



THE URGENT VS. IMPORTANT MATRIX



MY TIME DISTRIBUTION



MY TIME JOURNAL

TIME	ACTIVITY	QUANT
1:00	Working	10
2:00	Reading	5
3:00	Shopping	15
4:00	Rest	30

TOTAL HOURS:
TOTAL HOURS QUANT:

Important

Urgent

DO IT

Things with clear deadlines and consequences for not taking immediate action.

Examples

- Finishing a client project
- Submitting a draft article
- Responding to some emails
- Picking up your sick kid from school

Not Urgent

SCHEDULE IT

Activities without a set deadline that bring you closer to your goals. Easy to procrastinate on.

Examples

- Strategic planning
- Professional development
- Networking
- Exercise

Not Important

DELEGATE IT

Things that need to be done, but don't require your specific skills. Busy work.

Examples

- Uploading blog posts
- Scheduling
- Responding to some emails
- Meal prep

DELETE IT

Distractions that make you feel worse afterward. Can be okay but only in moderation.

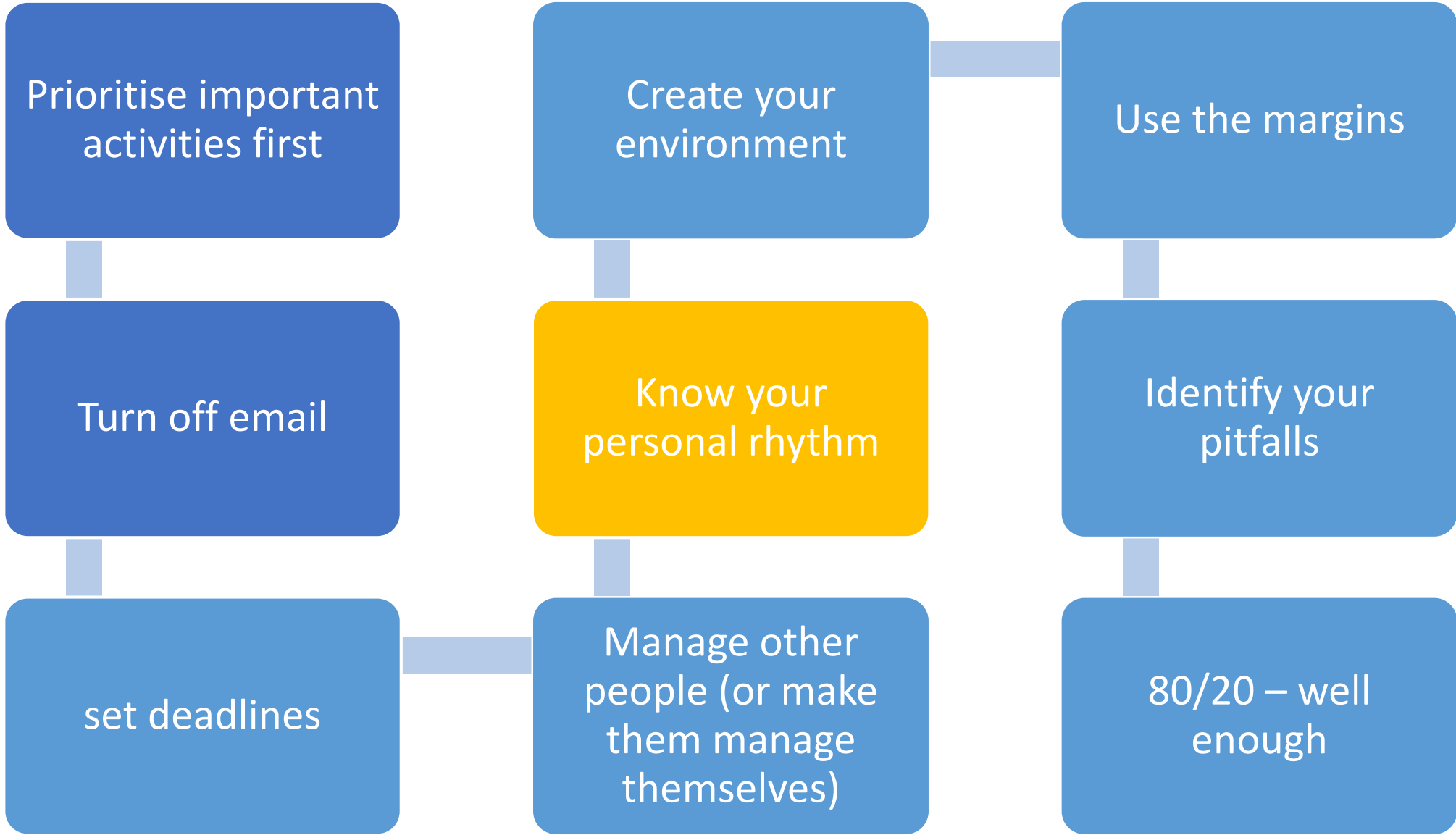
Examples

- Social media
- Watching TV
- Video games
- Eating junk food

The pomodoro technique (25-5)x4

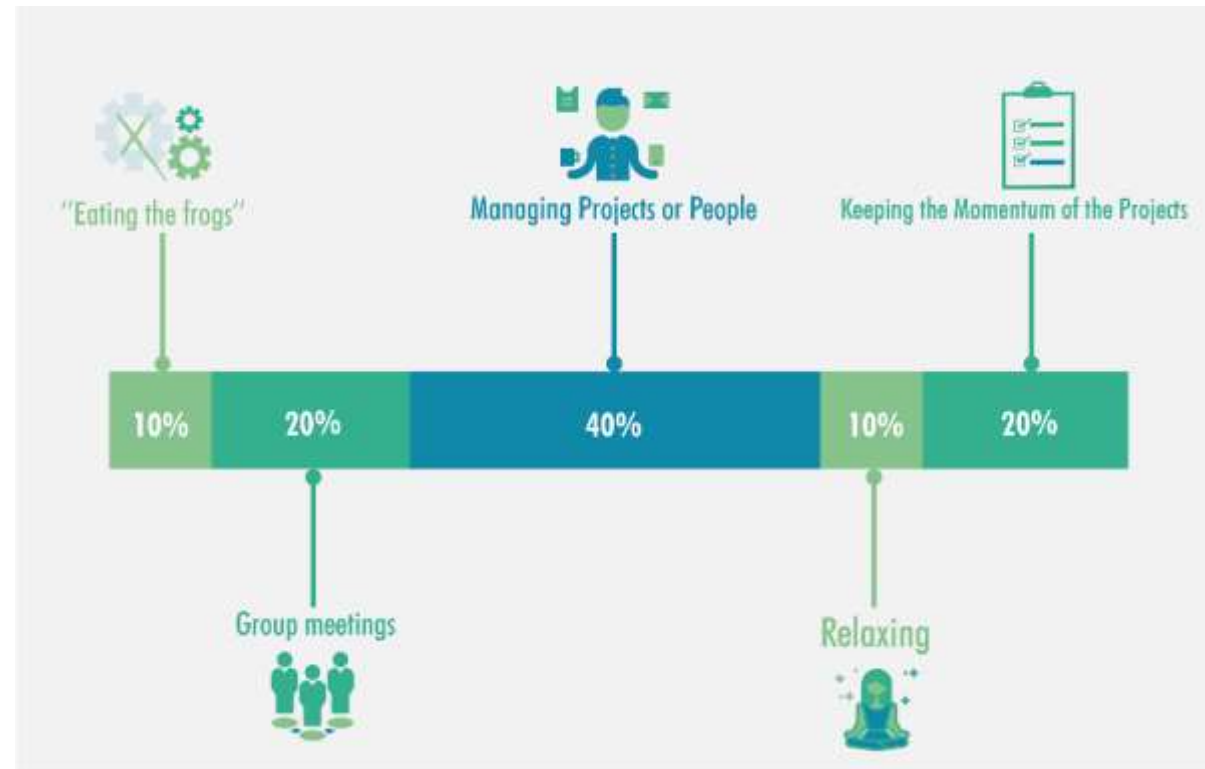
- 👍 Minimise distractions, discourages multitasking, reduced procrastination, heart health, ADD/ADHD, more lightbulb moments, better afternoon concentration (pacing)
- 👎 Distracting for some, inconsiderate of colleagues or customers, breed inflexibility





Doing the work

- Every project is different
- Impossible to give “how to guide”
- Good opportunity to get profile of “a day in the life”
- However, every day is different.

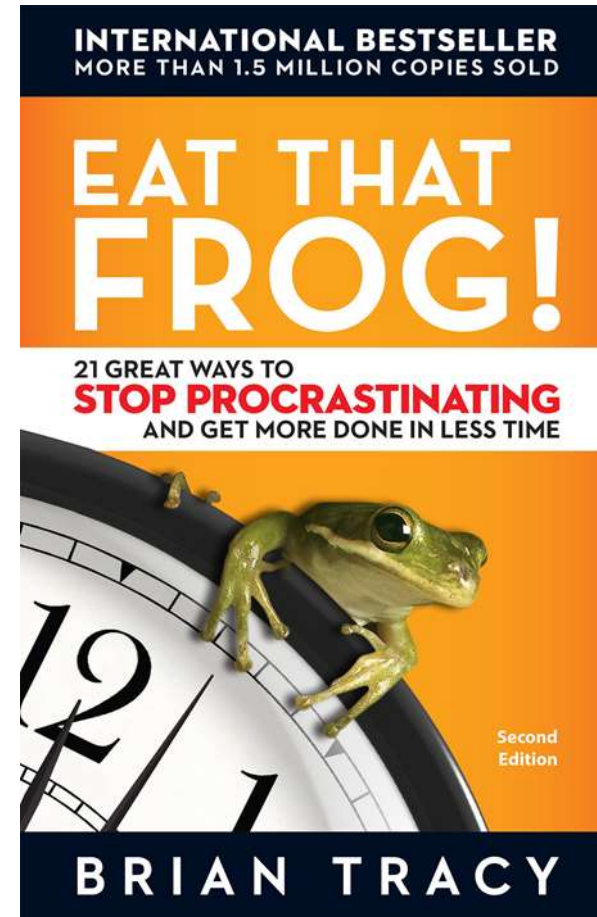


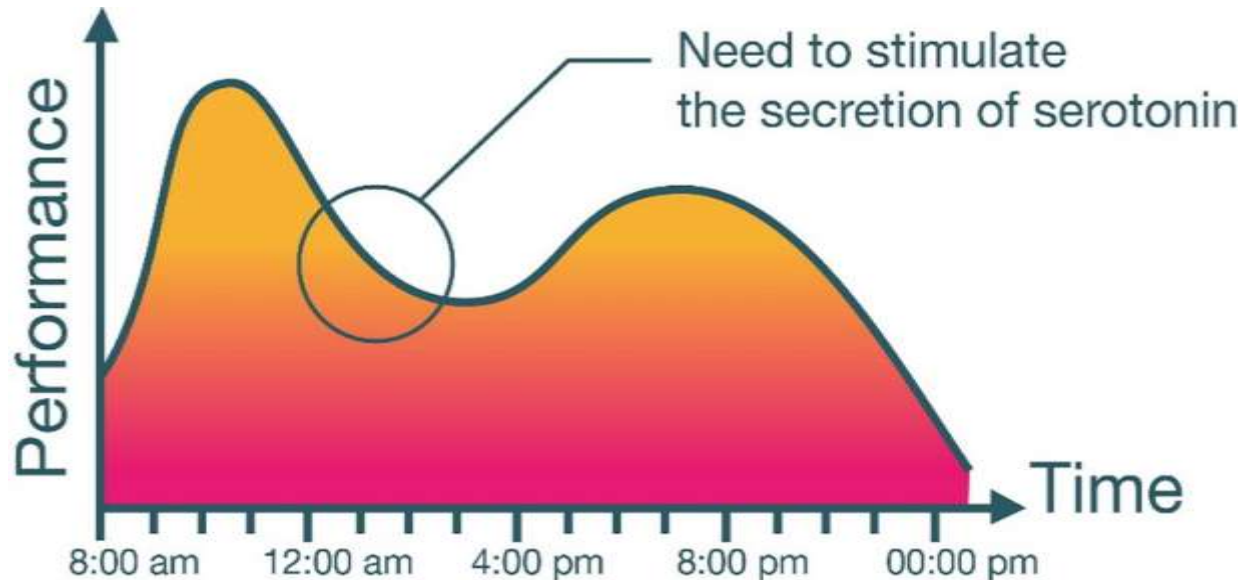
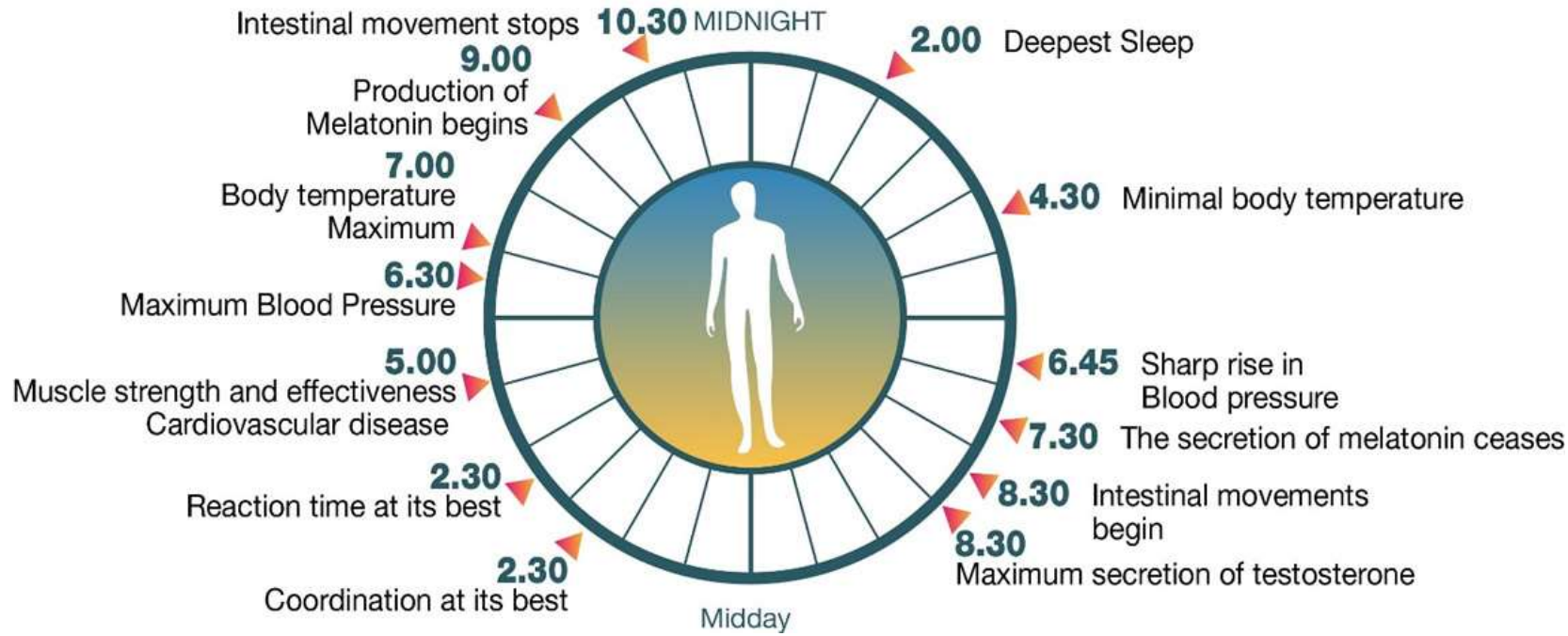
The most uncomfortable,
distasteful things you don't want
to do, BUT actually need to do
(=the 🐸)

Eat that Frog

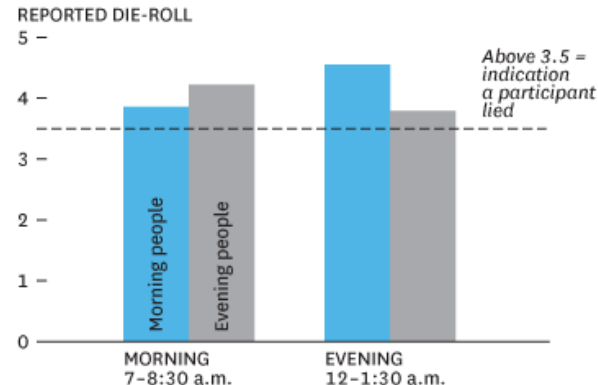
HOW TO EAT THE FROG

- 1. IDENTIFY YOUR FROG** 🐸
a.k.a. your hardest, most important task for the day. Just one!
- 2. EAT IT** 🍴
Do your most important task first thing in the morning. Don't give yourself the chance to put it off for later.
- 3. REPEAT EVERY DAY** 🔄
You'll be amazed how quickly small steps taken consistently add up to big accomplishments.





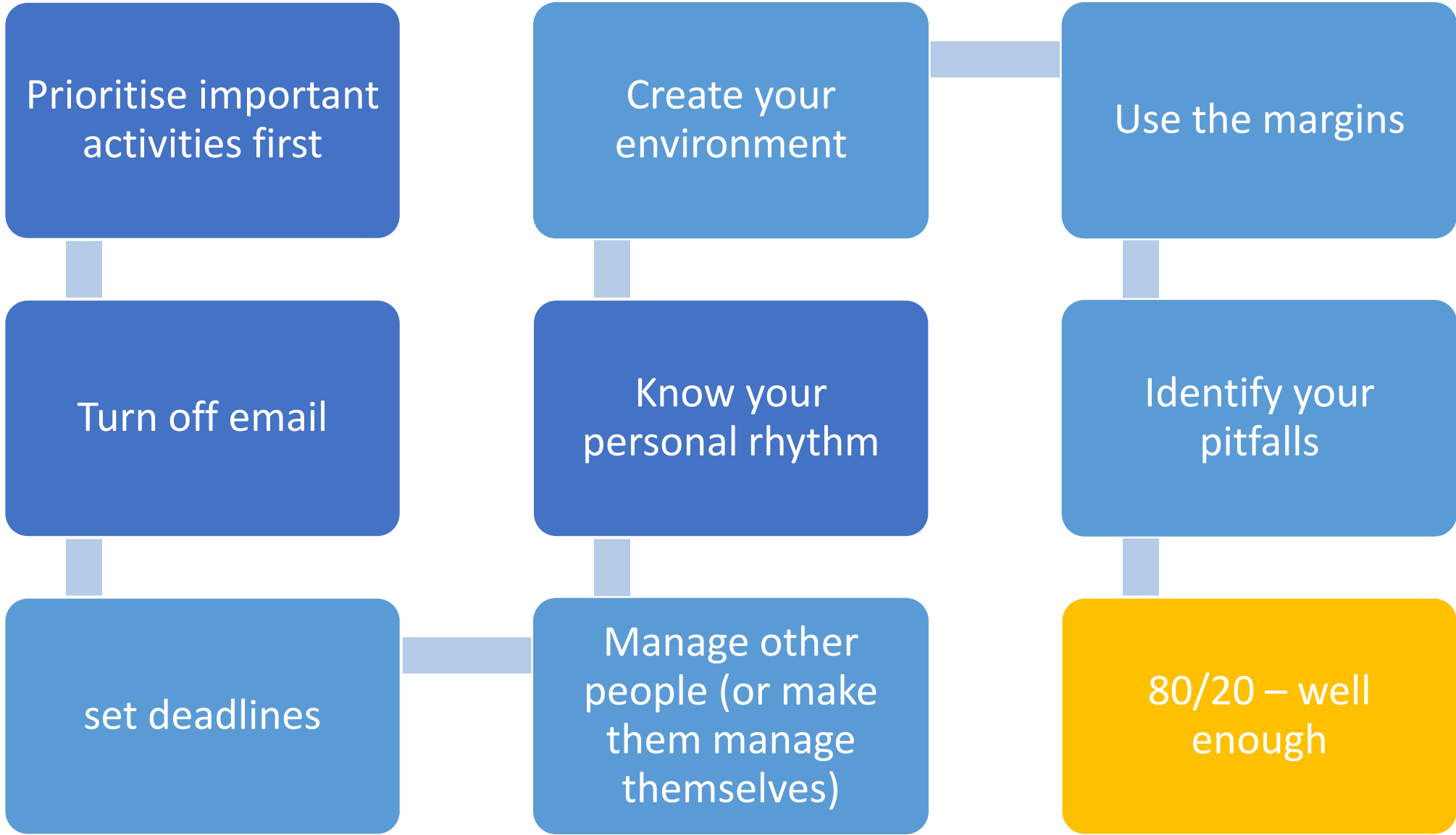
LOW ENERGY, LOW ETHICS
In an experiment involving die rolls, night owls were more likely to cheat in the morning. Early birds cheated more in the evening.



SOURCE CHRISTOPHER BARNES, BRIAN GUNIA, AND SUNITA SAH

HBR.ORG

AM	PM
Gall Bladder Allow your body to sleep and engage in regenerative processes. Some negative emotions that you may find yourself dealing with during this time are bitterness, resentment, or trouble forgiving.	12 Heart Great time to eat heart healthy foods and engage socially.
Liver Your body should be sleeping deeply and performing detoxing processes. If you wake up frequently during this time you may be putting too much of a toxic load on your body especially alcohol. Some negative emotions that you may find yourself dealing with during this time are depression, anger, or powerlessness.	1 Some negative emotions that you may find yourself dealing with during this time are insecurity, abandonment, or grudging.
Lung The final stages of sleep your body should be feeling restored and well rested. Some negative emotions that you may find yourself dealing with during this time are grief, loneliness, or betrayal.	2 Small Intestine As your body is digesting lunch this is a good time to get back to work.
Large Intestine This is a great time to wake up, drink water, and let your bowels get moving. When your colon is empty you'll have an easier time digesting your breakfast without feeling sluggish. Some negative emotions that you may find yourself dealing with during this time are perfectionism, self hatred, or yearning.	3 Some negative emotions that you may find yourself dealing with during this time are denial, vulnerability, or lack of emotion.
Stomach While your stomach is engaged, this is the perfect time to eat a nutritious breakfast. Some negative emotions that you may find yourself dealing with during this time are worry, over-responsibility, or hopelessness.	4 Bladder Drink plenty of water to support your body in natural detoxing processes.
Spleen Your metabolism is at a peak during this morning and you're more mentally sharp to get work done. Some negative emotions that you may find yourself dealing with during this time are apathy, entitlement, or self-consciousness.	5 Some negative emotions that you may find yourself dealing with during this time are fear, dread, or bad memories.
	6 Kidney Eat dinner to replenish your energy and keep your kidneys from working too hard.
	7 Some negative emotions that you may find yourself dealing with during this time are shame, timidity, or unworthiness.
	8 Reproductive Great time for intimacy or a relaxing bath to promote circulation.
	9 Some negative emotions that you may find yourself dealing with during this time are jealousy, muddled thoughts and feelings, or love unreturned.
	10 Endocrine Avoid eating after this time in the evening and allow your body to prepare for sleep by regulating temperature and metabolism.
	11 Some negative emotions that you may find yourself dealing with during this time are paranoia, displeasure, or nightmares.



Prioritise important activities first

Create your environment

Use the margins

Turn off email

Know your personal rhythm

Identify your pitfalls

set deadlines

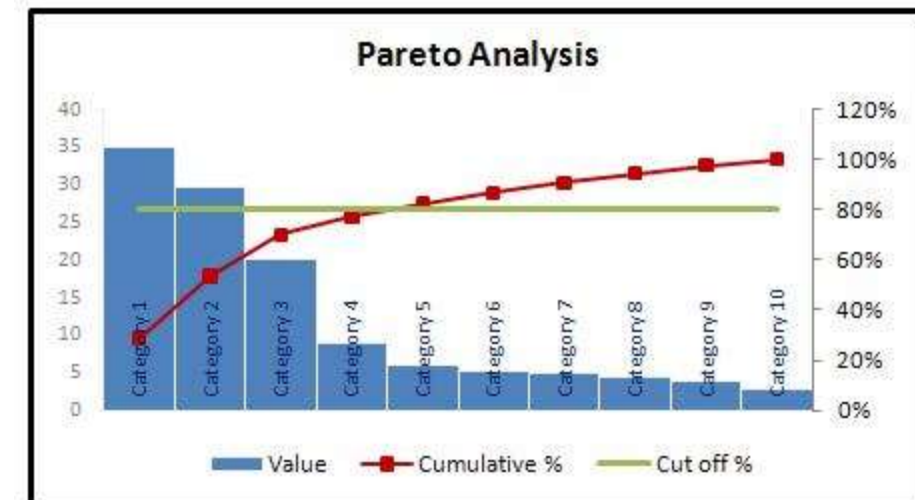
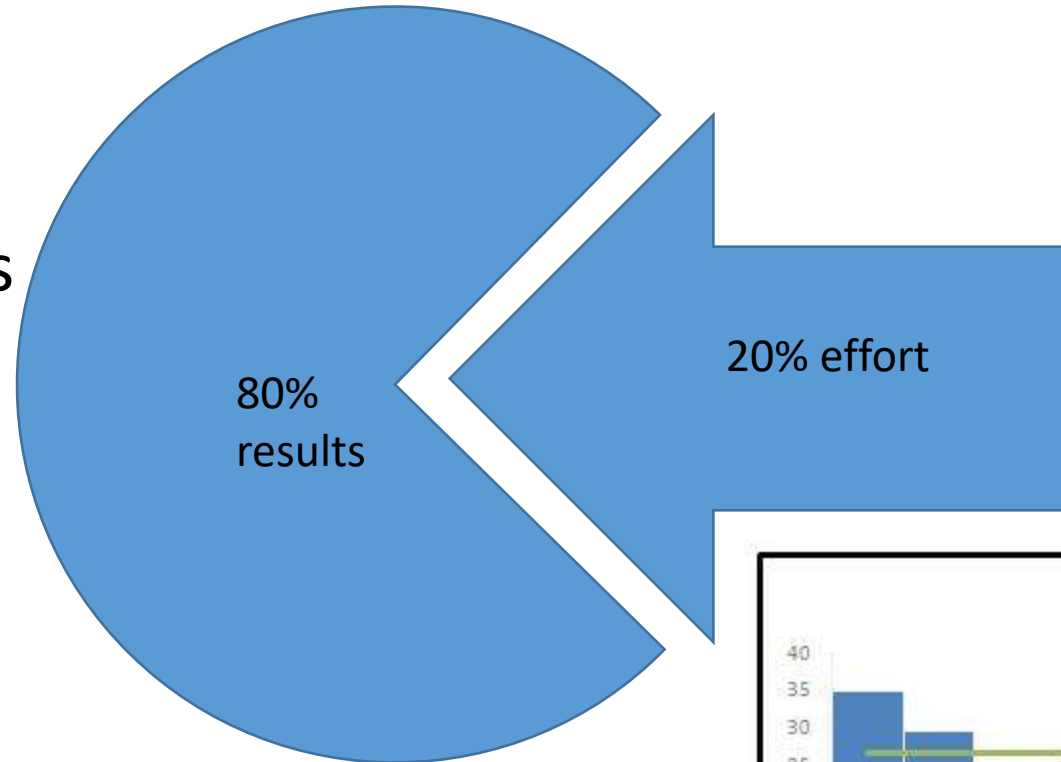
Manage other people (or make them manage themselves)

80/20 – well enough

Pareto Analysis

For solving problems

1. List problems
2. Identify root causes
3. Score problems
4. Group (by rc)
5. Sum
6. action



An example

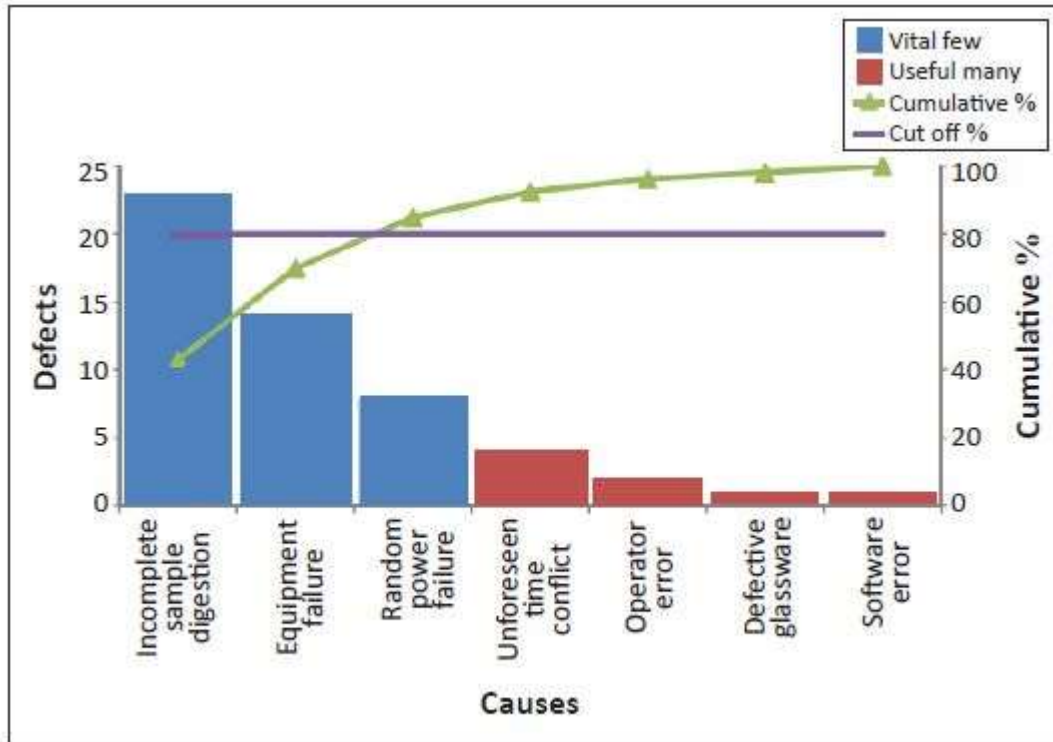


FIGURE 2: Pareto chart – Pareto analysis: Selenium analysis process.

#	problem	Root cause	Score/frequency
1			
2			
3			
4			
5			
6			

The modified Borda count

Building consensus: group decision making

1. The debate
2. The vote
3. The analysis



Generating Ideas

For researchers



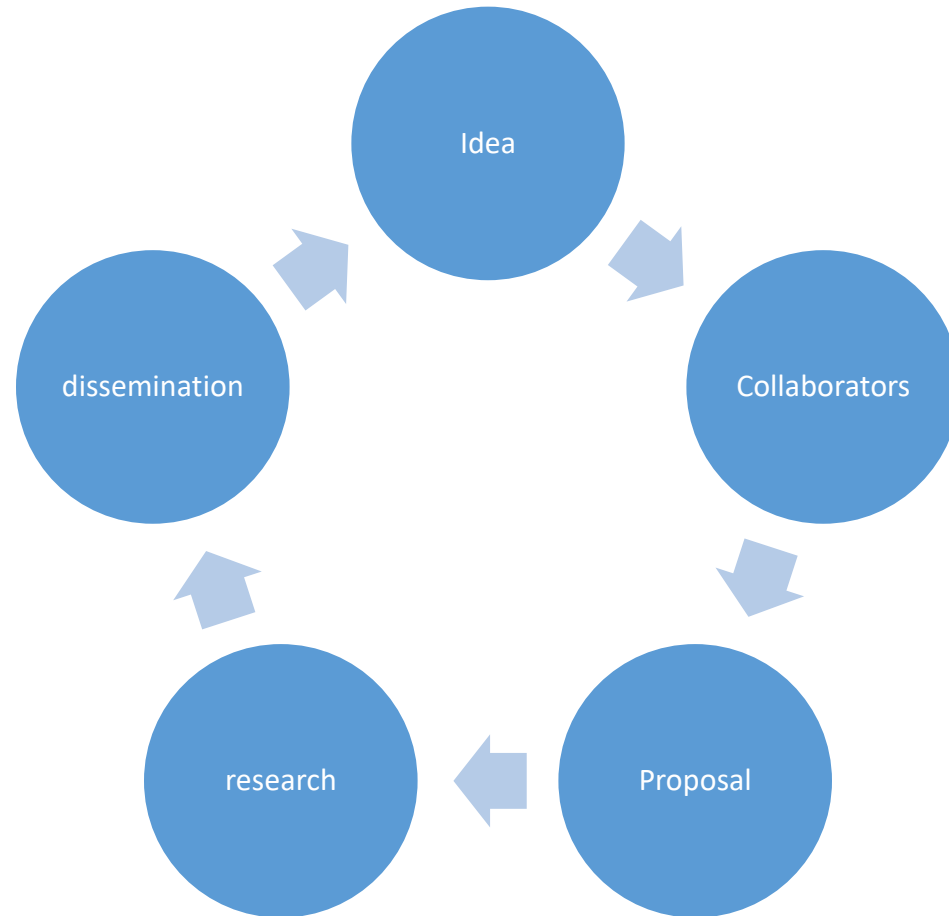
Steve Jobs

***Creativity is just connecting things.** When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. **That's because they were able to connect experiences they've had and synthesize new things.** And the reason they were able to do that was that they've had more experiences or they have thought more about their experiences than other people."*

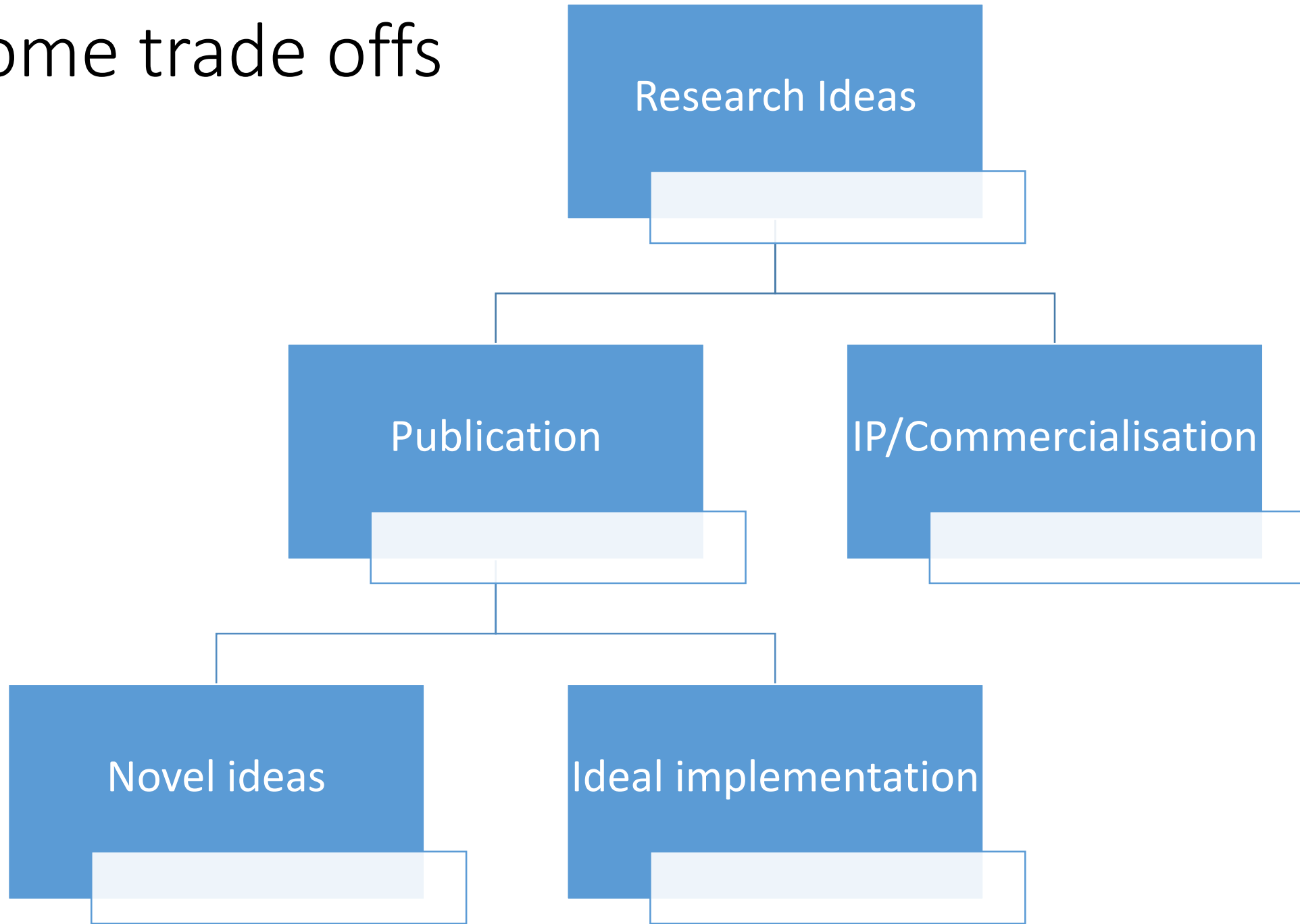
Paul Dirac

The measure of greatness in scientific idea is the extent to which it stimulated thought and opens up new lines of research

Research life cycle

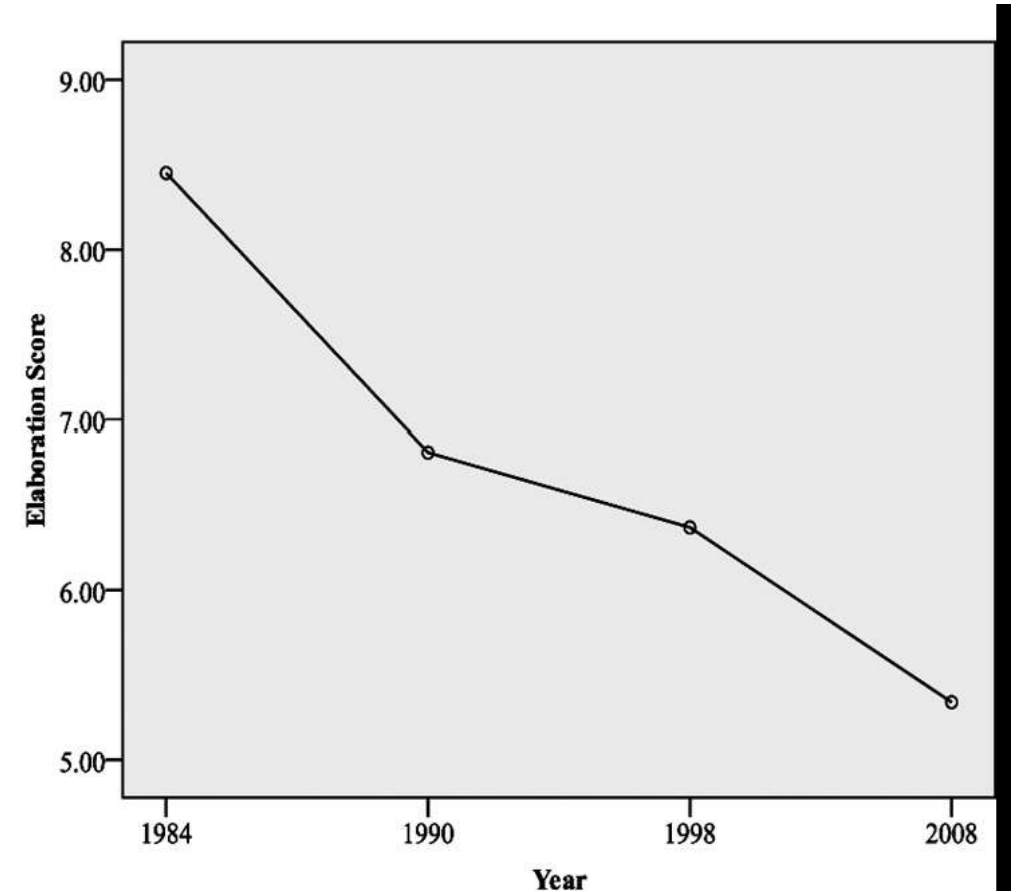
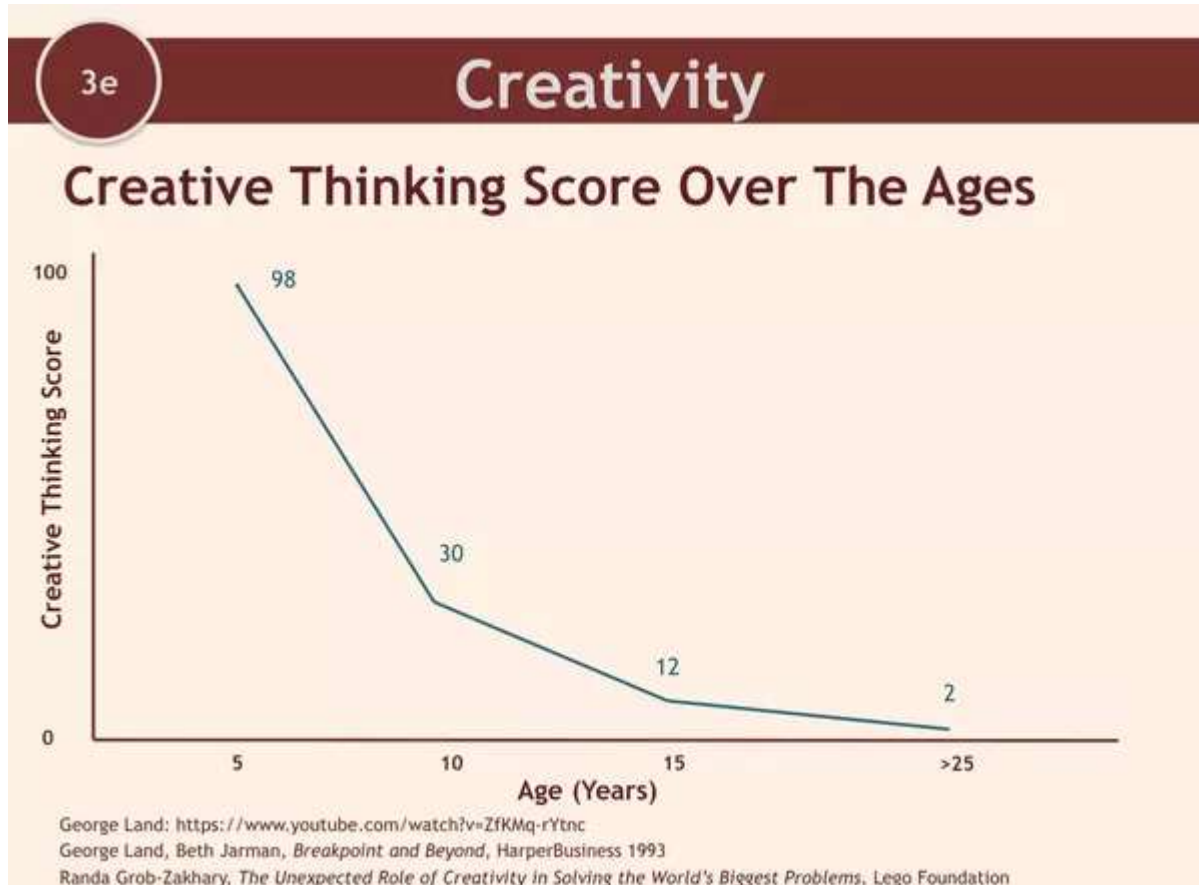


Some trade offs



The Torrance test

- IQ, social-relational , creativity (TTCT)



Alternative uses



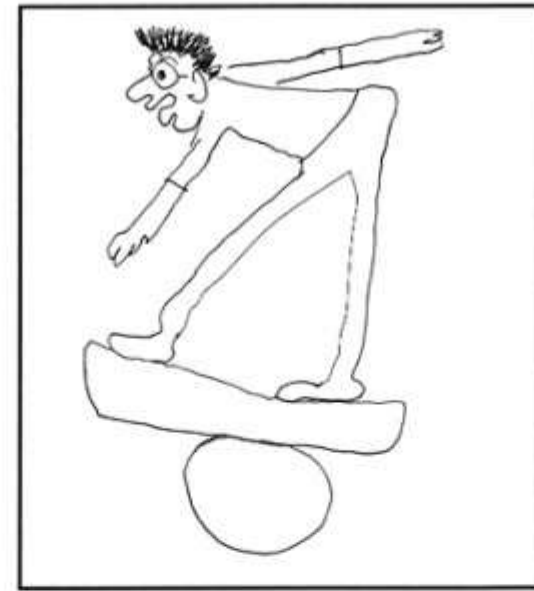
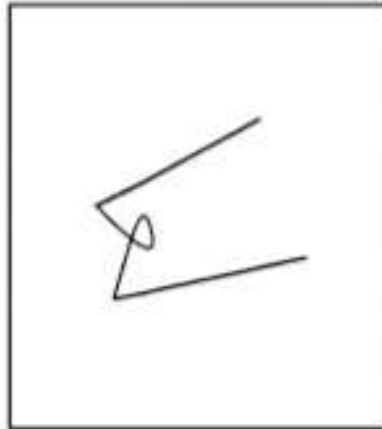
Fluency – how many uses you can come up with

Originality – how uncommon those uses are (e.g. “router restarter” is more uncommon than “holding papers together”)

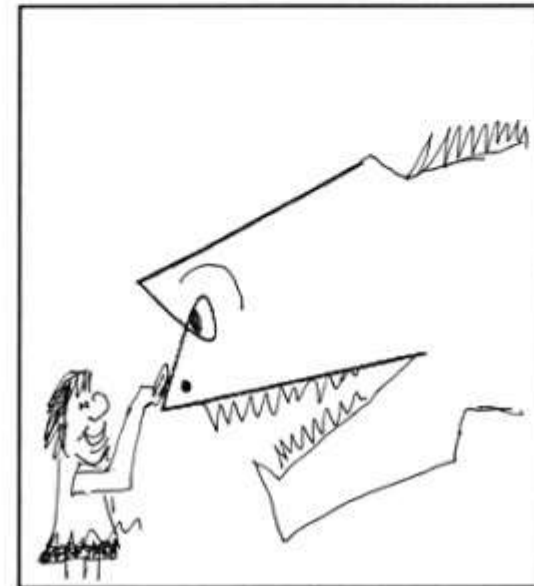
Flexibility – how many areas your answers cover (e.g. cufflinks and earrings are both accessories, aka one area)

Elaboration – level of detail in responses; “keeping headphones from getting tangled up” would be worth more than “bookmark

Incomplete figures



BALANCING ACT



NEW FRIEND

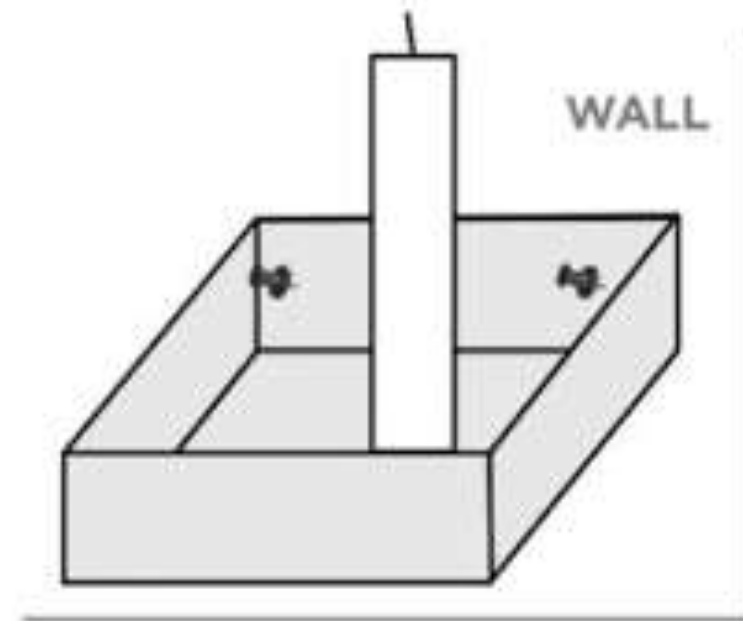
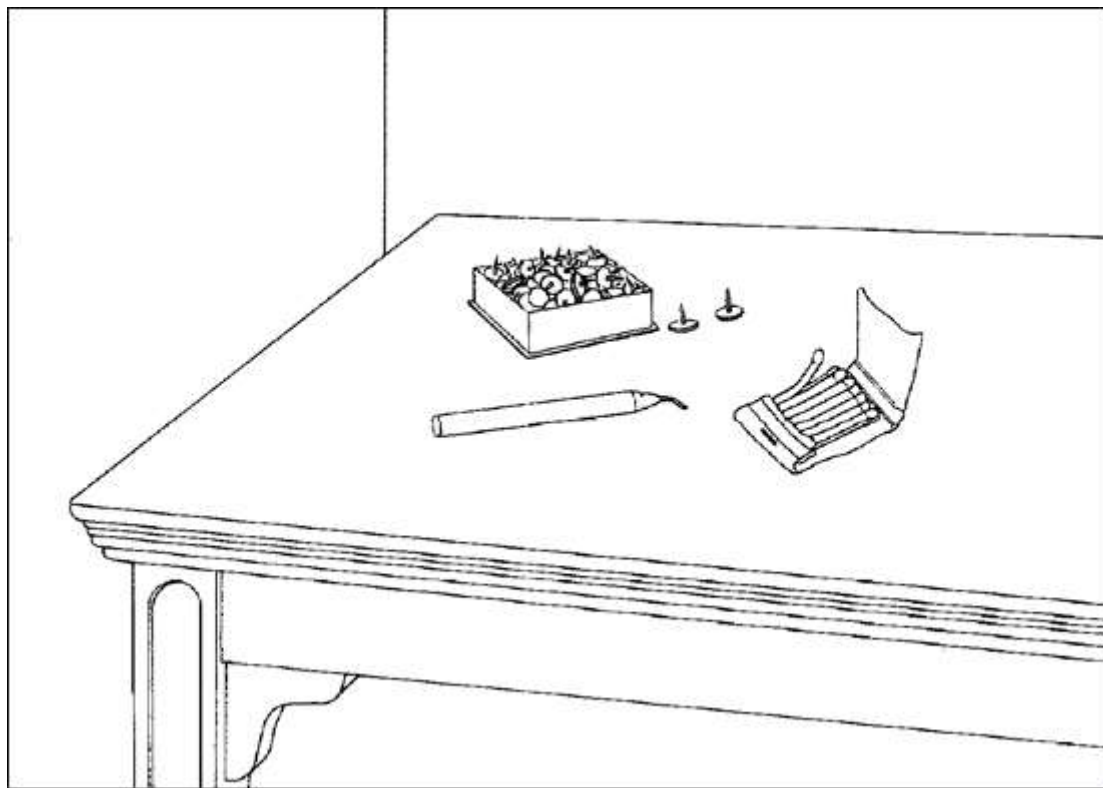
riddles

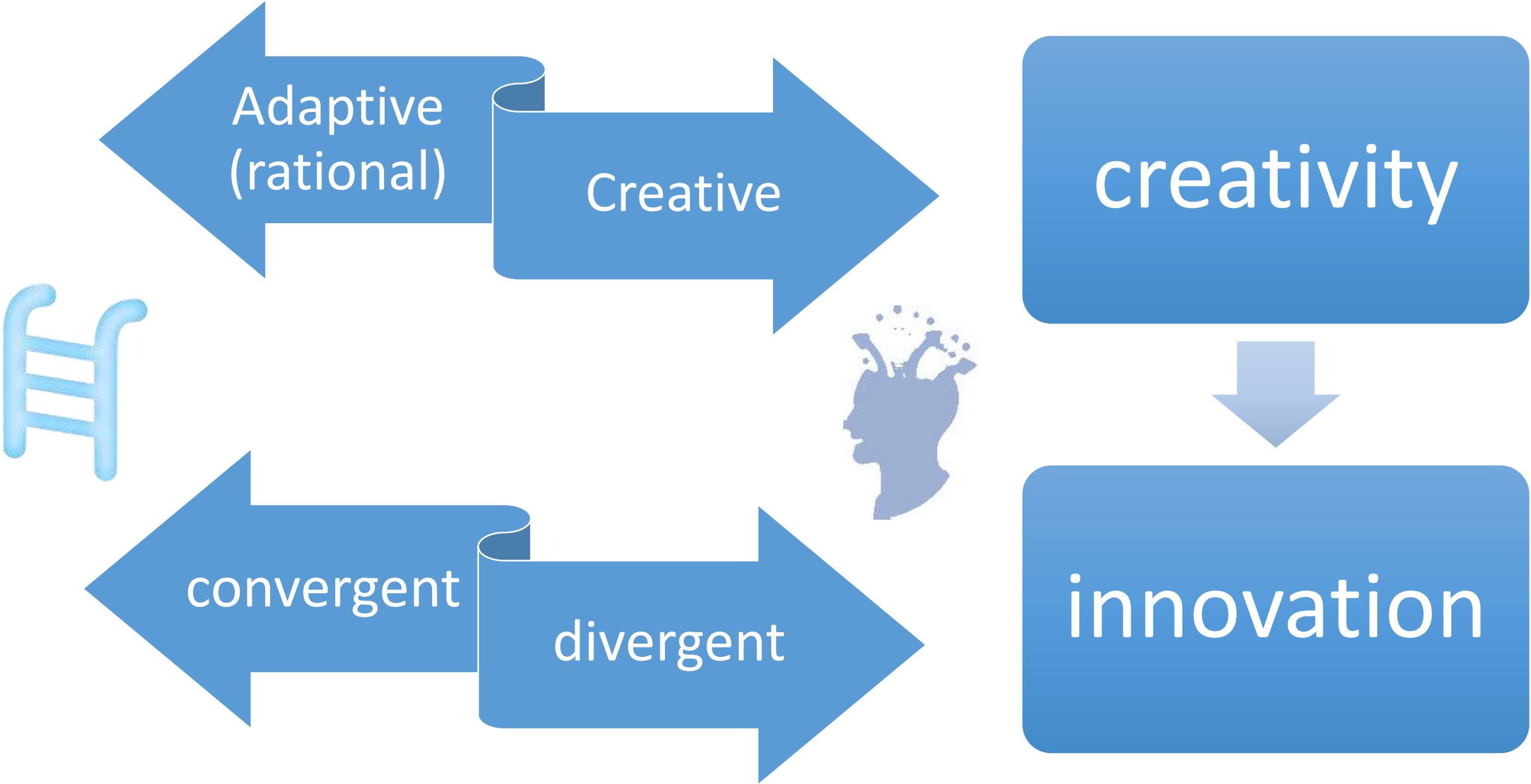
- “A box without hinges, key, or lid, yet golden treasure inside is hid. What is it?” asks Bilbo Baggins in Tolkein’s *The Hobbit*.

Remote associates

- Falling – Actor – Dust

Problem Solving





Adaptive
(rational)

Creative

creativity

convergent

divergent

innovation

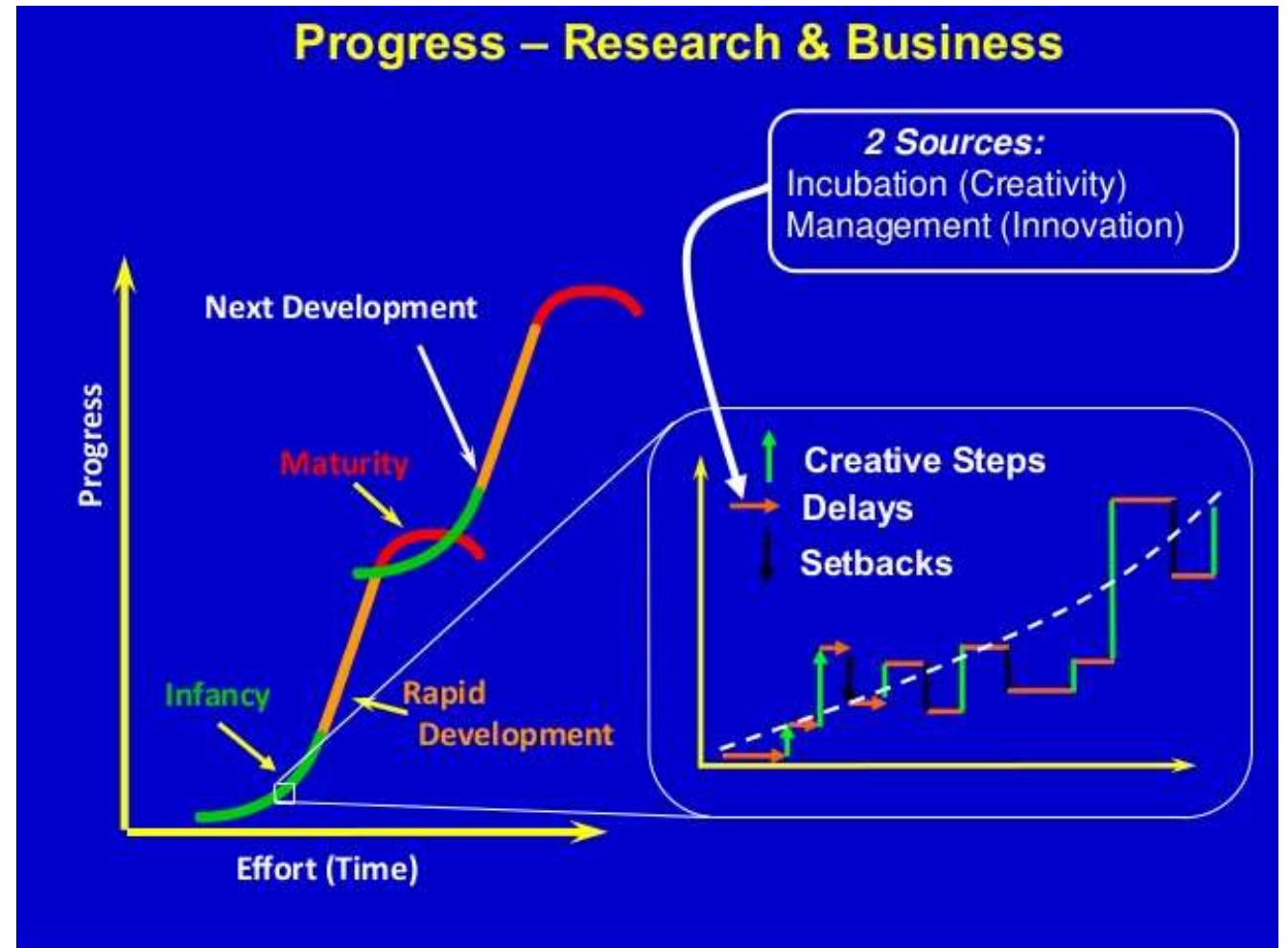
Why is creativity important in Research



Stage 1: Infancy

Stage 2: Rapid development

Stage 3: maturity



Blocks to creativity

Fear of failure

Ambiguity discomfort

Wanting to conform

Worry about practicalities (.e.g resource availability)

Rigidity (thinking and execution)

Taking risks with research

- Creative people are much more likely to take risks
- What kinds of risks can researchers take? Possible criticism? Releasing the security of old habits? Fostering a challenging mindset? Living with ambiguity?

Idea Generation

Scamper - Osborne

S ubstitute	
C ombine	
A dapt	
M odify	
P ut to other uses	
E liminate	
R everse	

Fostering divergent thinking 5W+H

How could researchers improve their presentation skills?

Ask why?

Why should researchers improve their presentation skills?

Answer

To improve the communication of their research

Reframed question

How could researchers become better communicators?

Let's try it

write down a challenge you currently face in your research in the form of a research question

Ask why

Reframe the question

Brainstorm new associations that go with the reframed questions

Select one or more of these new ideas and plan how they can be applied

What about publishable research in particular?

High impact,
low frequency

Highly creative ideas

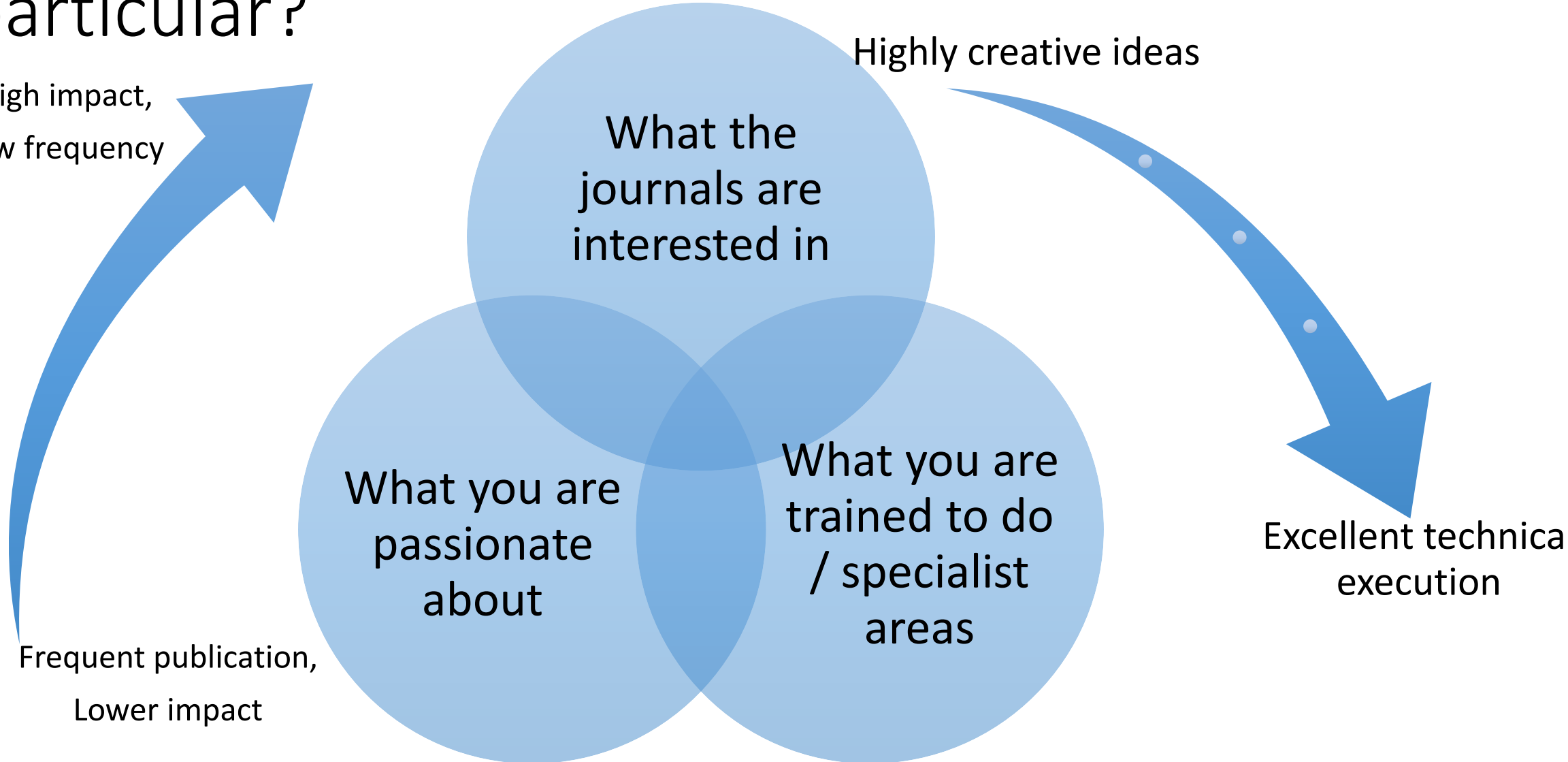
What the
journals are
interested in

What you are
passionate
about

What you are
trained to do
/ specialist
areas

Frequent publication,
Lower impact

Excellent technical
execution



FINER – selecting a topic form multiple ideas

Feasible

Interesting

Novel

Ethical

Relevant

<also consider PESTLE – is it politically acceptable, applicable, economic, sustainable....)

Linus Pauling

The best way to have a good idea is to have lots of ideas