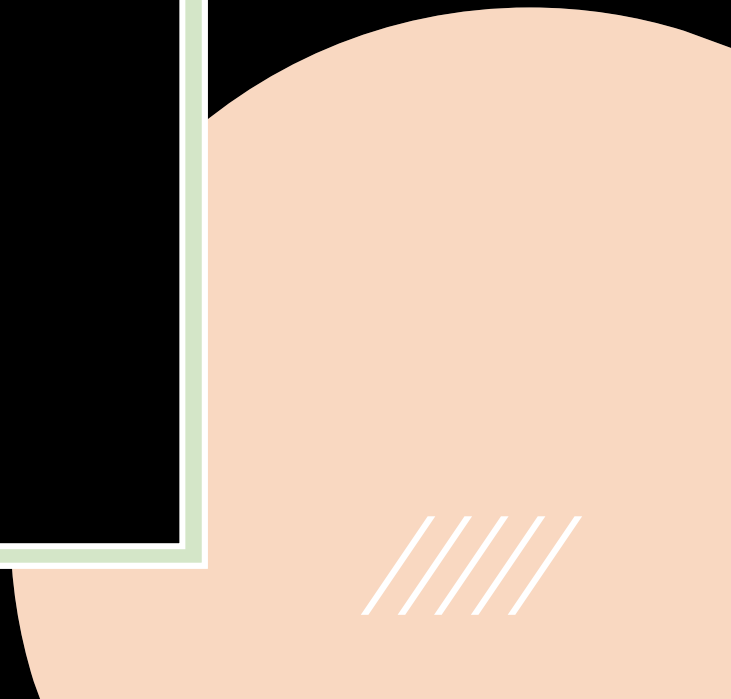
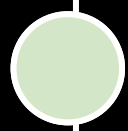
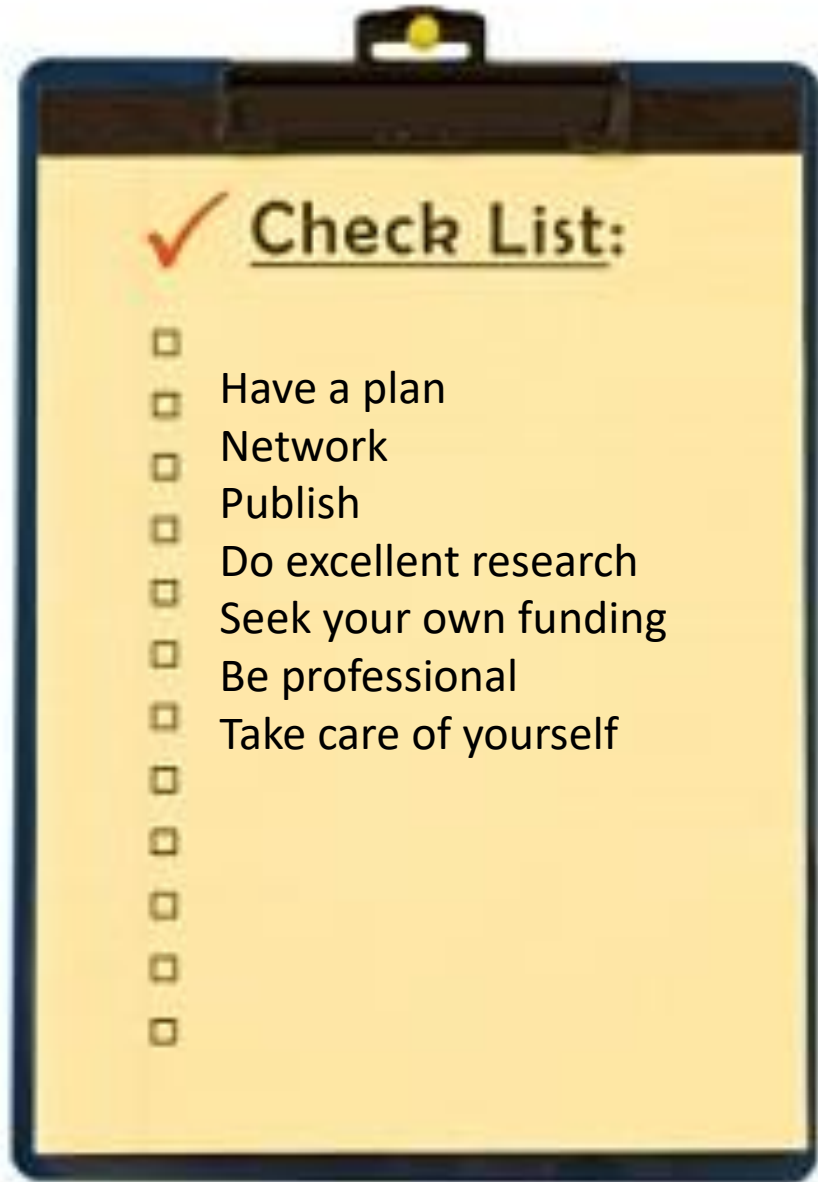


Personal Effectiveness



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....



Some statistics



SCIENCE POST-DOCS WORK AN AVERAGE OF 51
HOURS A WEEK



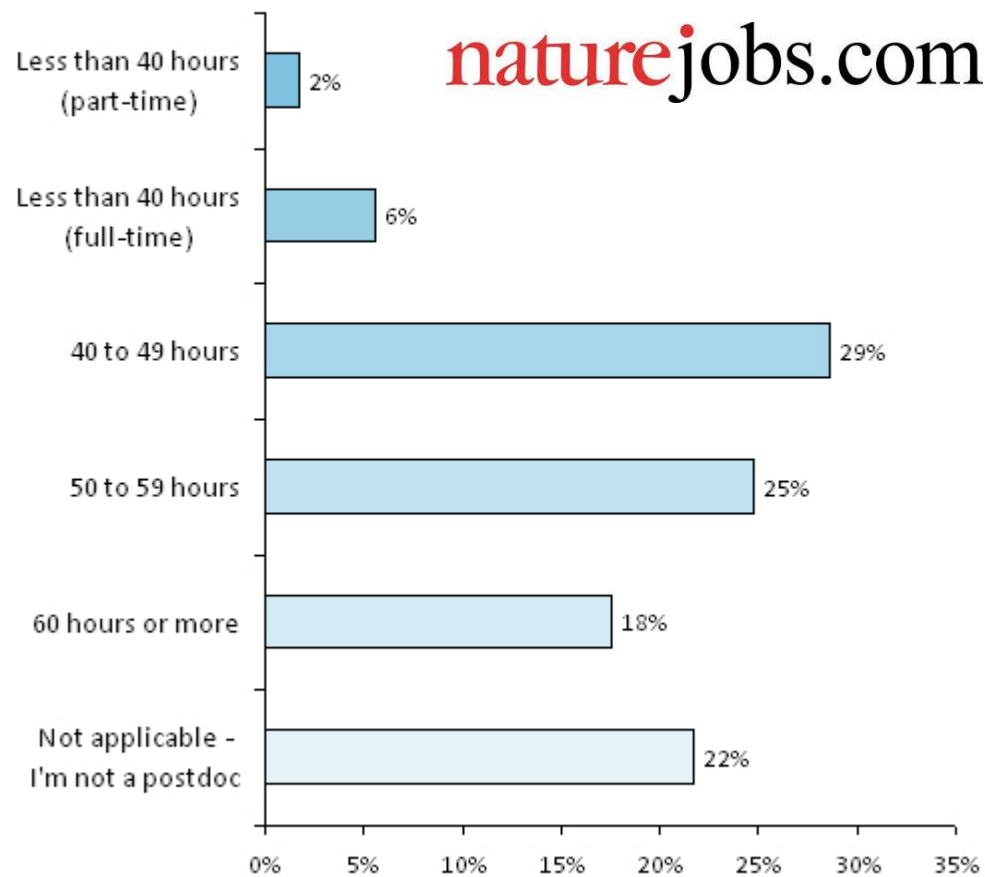
€12.48/HR,
TREND IT TO RISING HOURS,
TYPICALLY WORK LONGER HOURS OUT OF TERM TIME
(+7HRS)



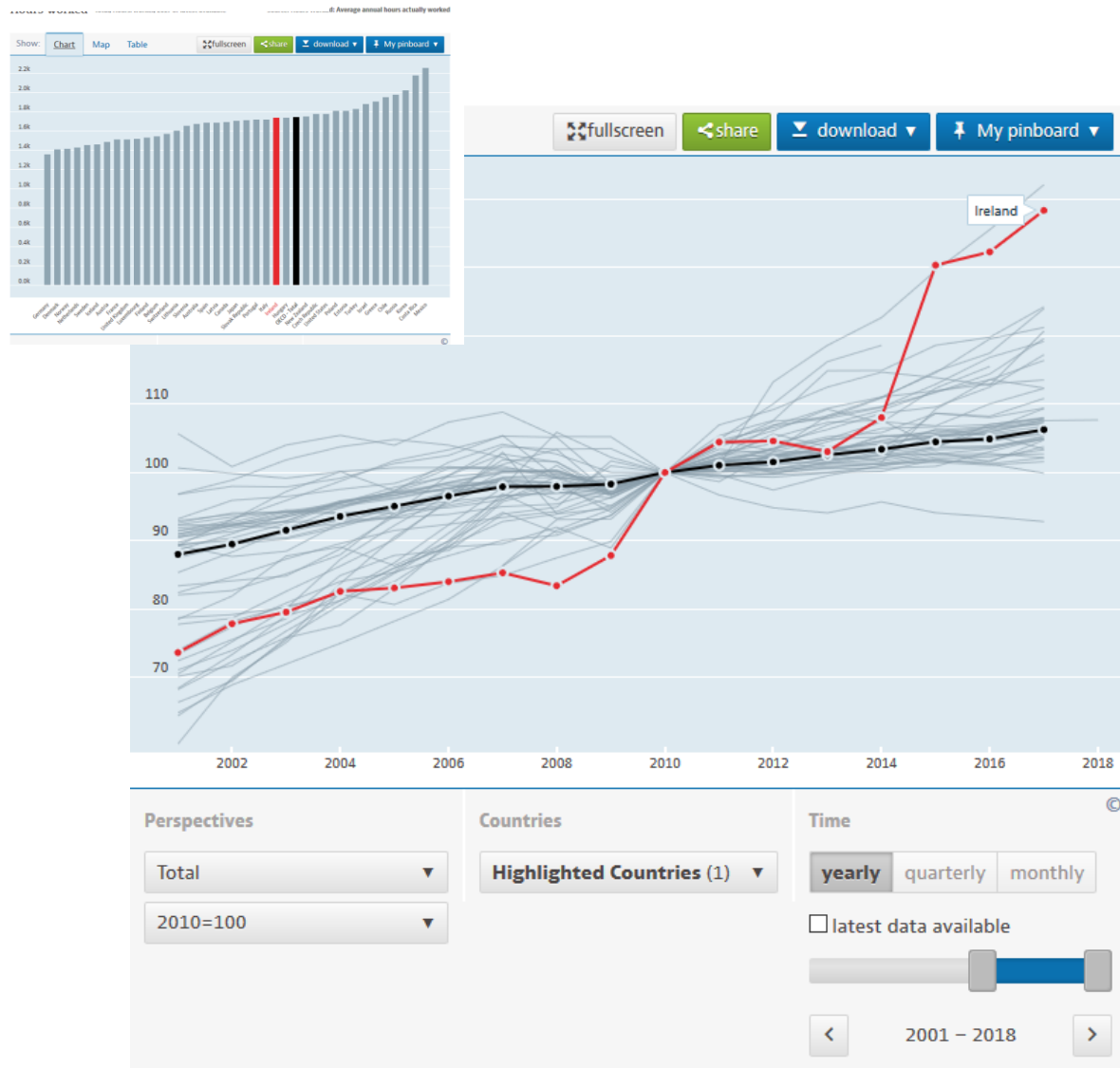
HENRY FORD, CONSTRUCTION CEOS – 8 HR/DAY,
KNOWLEDGE WORKERS (WALL STREET)? YEAR 1 ✓,
YEAR 4 X

Postdocs: how many hours do you work per week?

naturejobs.com

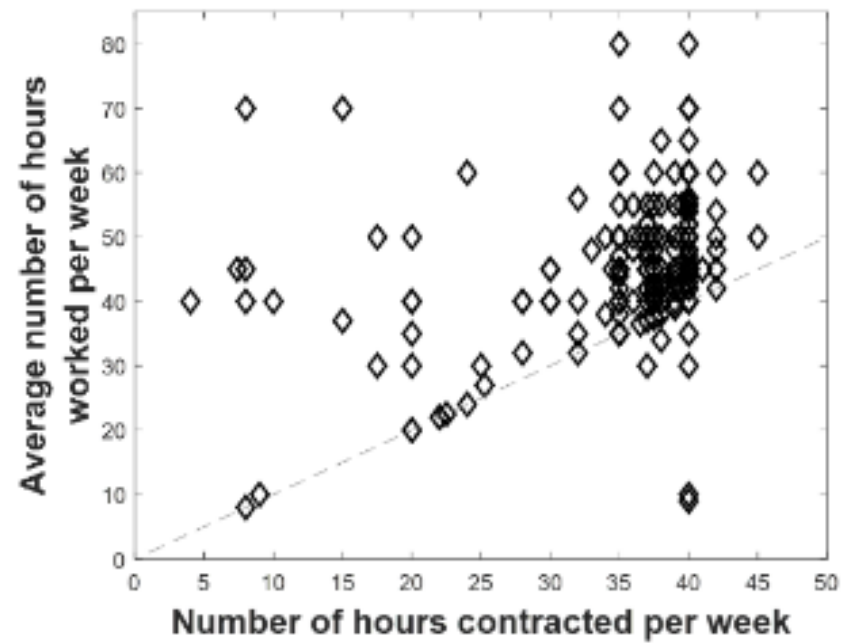


n = 860



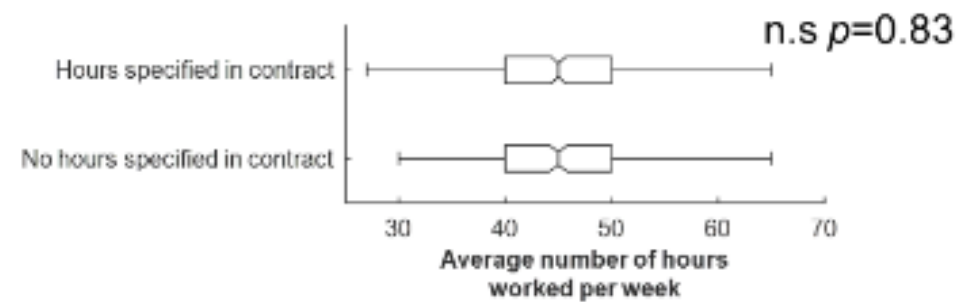
EU data

A



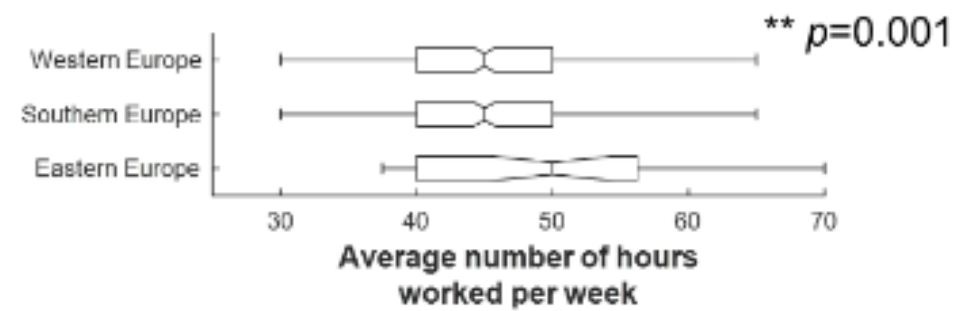
B

EFFECT OF TYPE OF CONTRACT



C

EFFECT OF EUROPEAN REGION



Improving time usage



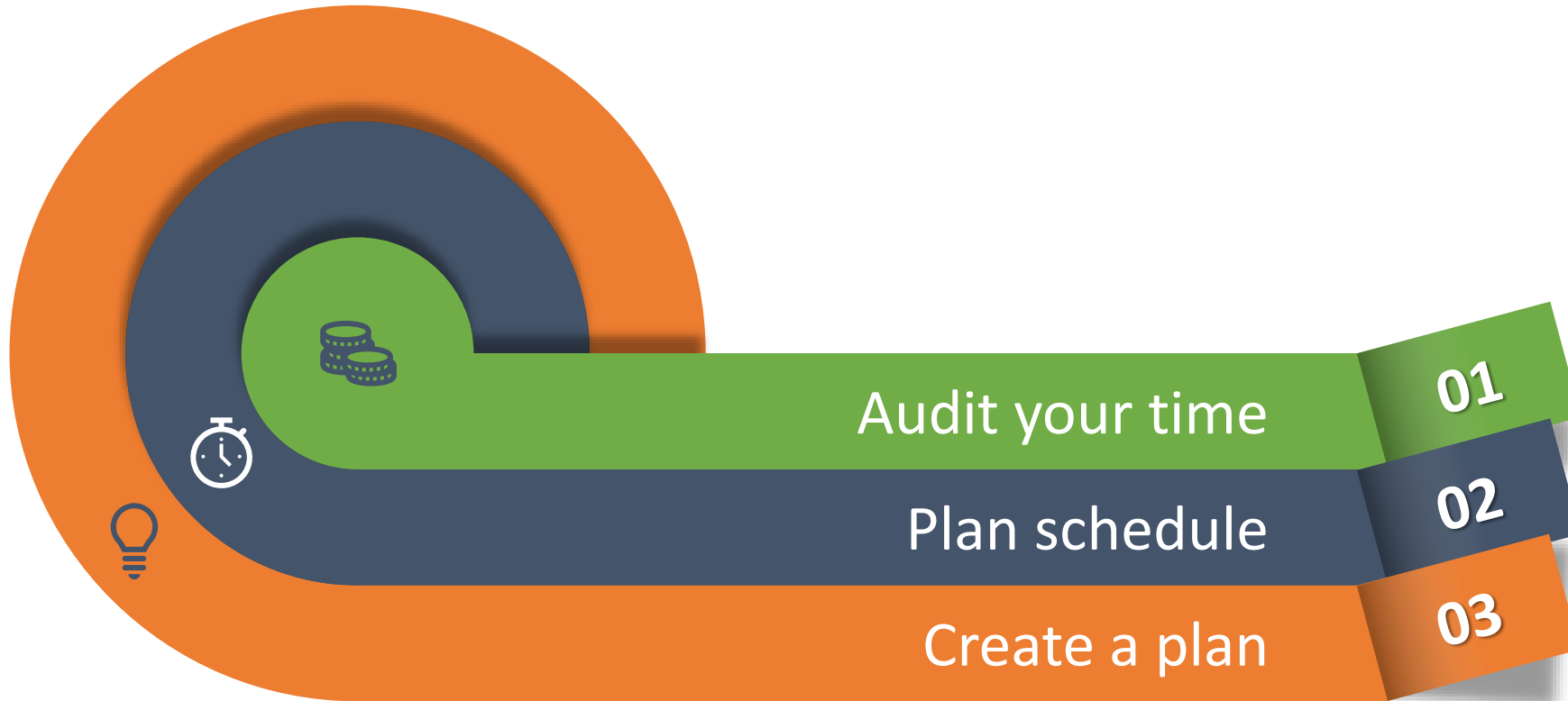
1. You want to get a current activity completed in less time.

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	Work.
	11		
		12	Read or overlook my accounts, and dine.
	1		
		2	Work.
	3		
	4		
	5	Put things in their places, supper, music, or diversion, or conversation; examination of the day.	
6			
7			
8			
Evening question, What good have I done today?	9	Sleep.	
	10		
	11		
	12		
	1	Sleep.	
2			
3			
4			

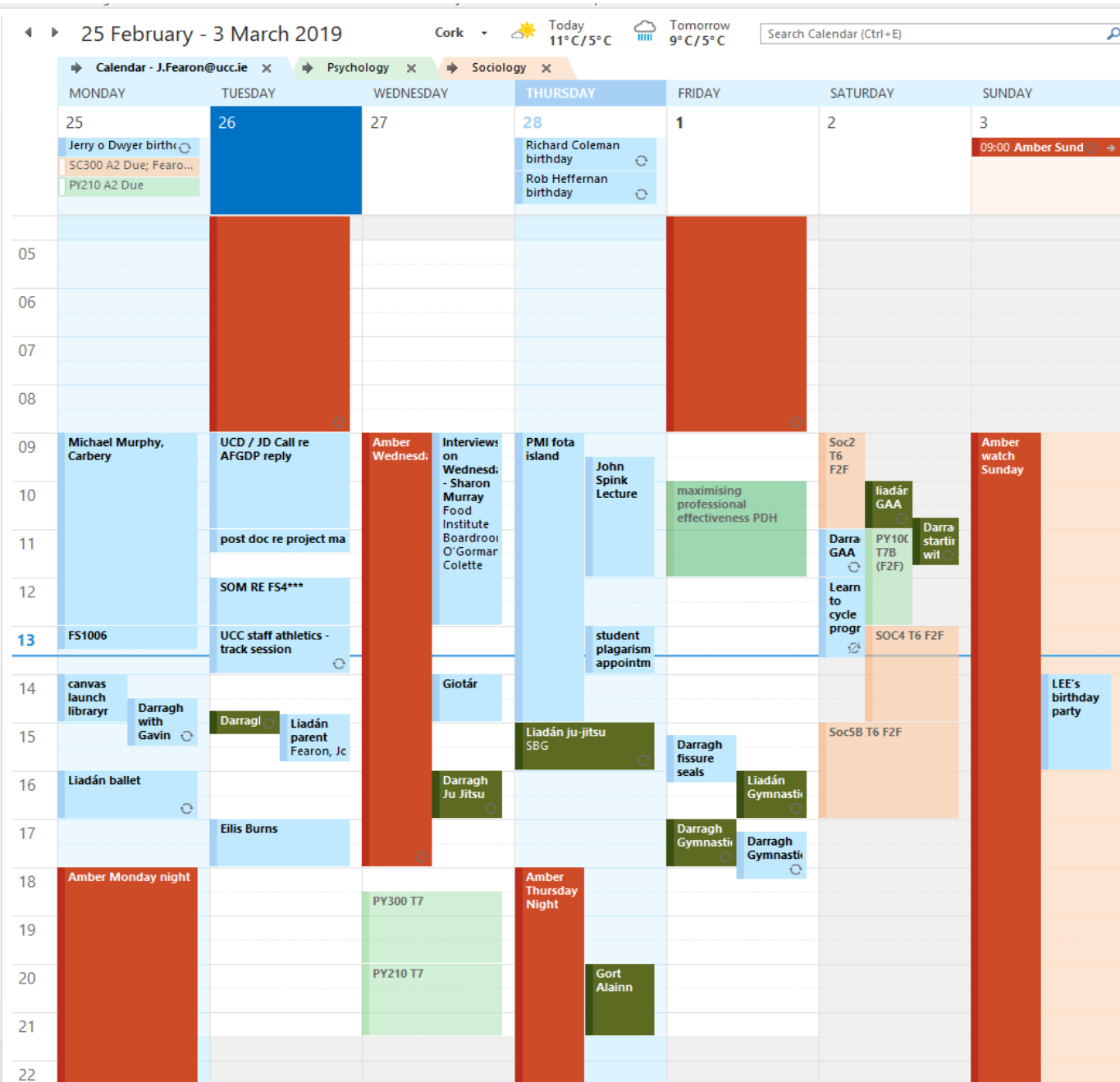
Benjamin Franklin's Schedule	
12:00 - 5:00 am	Sleep
5:00 - 8:00	Rise, wash, and address powerful goodness; contrive today's business and take resolution of the day; prosecute the current study; and breakfast
8:00 - 12:00 pm	Work
12:00 - 2:00	Read or overlook my accounts and dine.
2:00 - 6:00	Work
6:00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



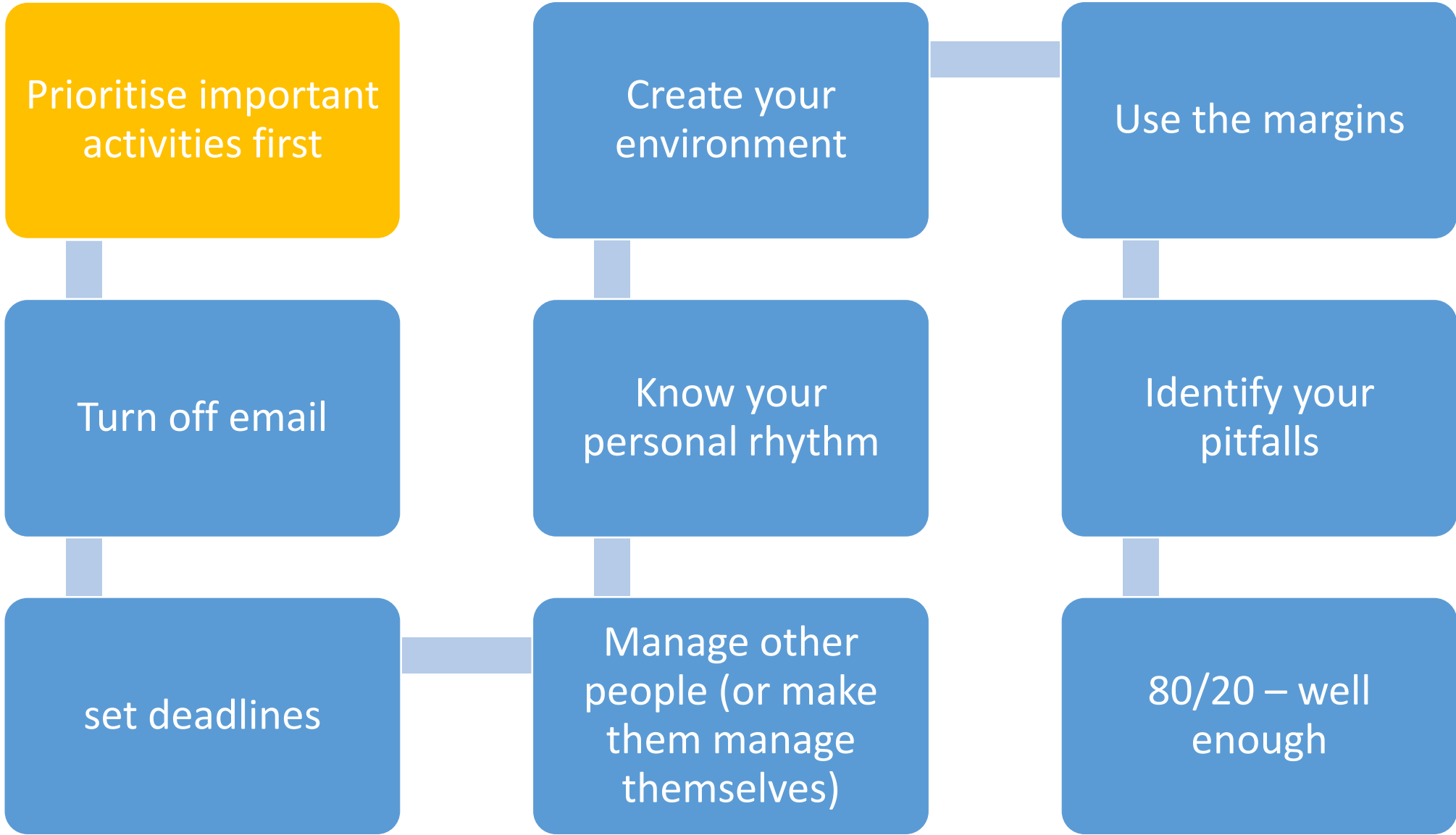


What time is locked in?

Sleep
Eat
Hygiene
Caring duties
Commuting

7 hr
1:30 hr
:30 hr
? hr
1 hr

Can you use this time more productively?



The time management formula

Productivity = k(time)(efficiency)

Jo's effectiveness formula

effectiveness = k(productivity)(prioritisation)

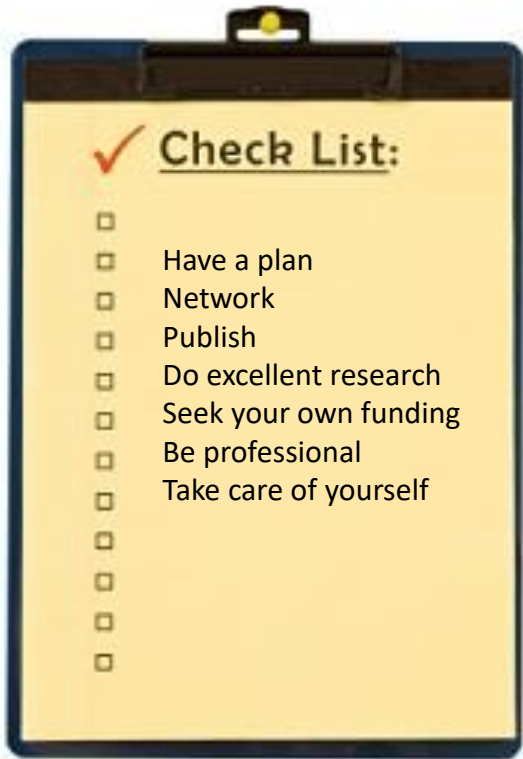
So what tools can we use?

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

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

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

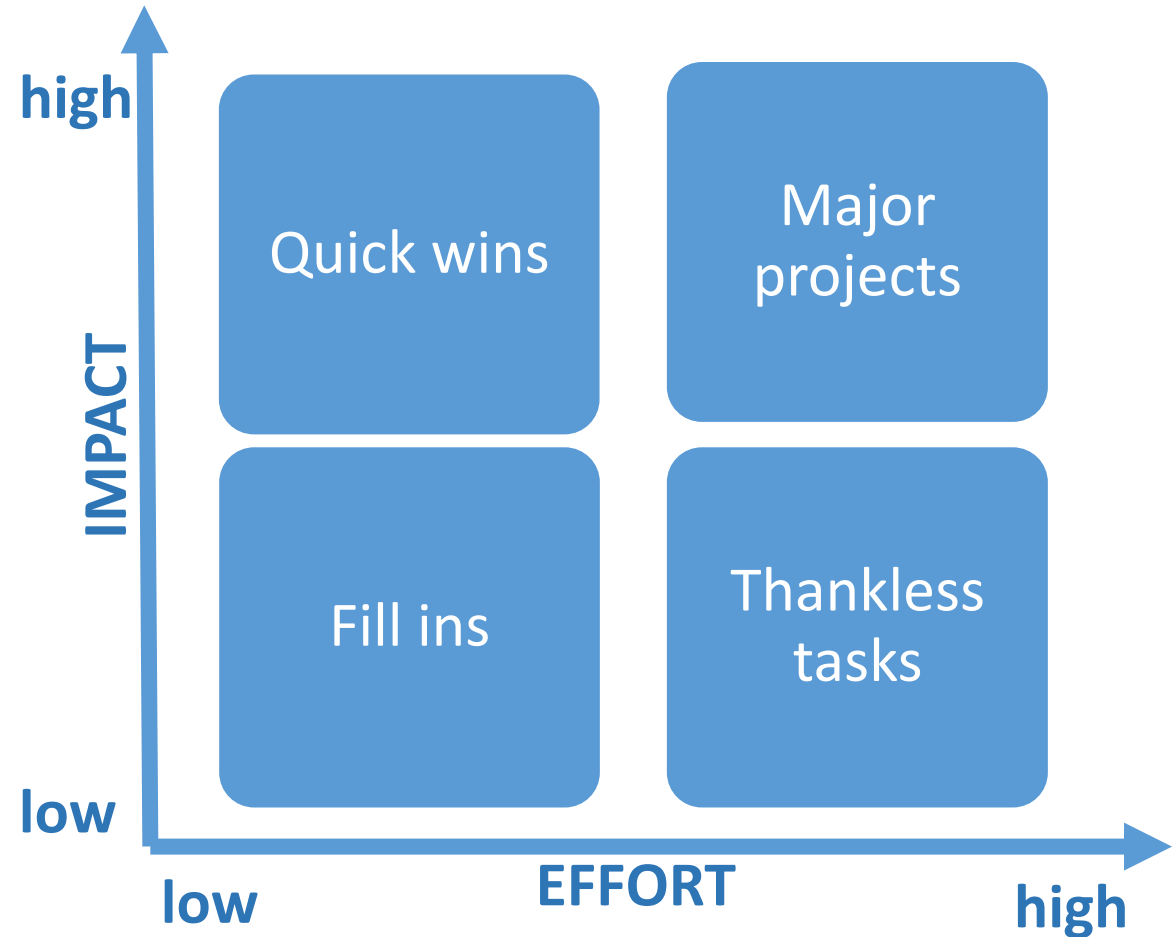
- A: chair a committee
- B: gain professional membership
- C: 1st author on next publication
- D: get a (travel) grant
- E: increase salary
- F: improve H index by 5
- G: invited to speak internationally

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



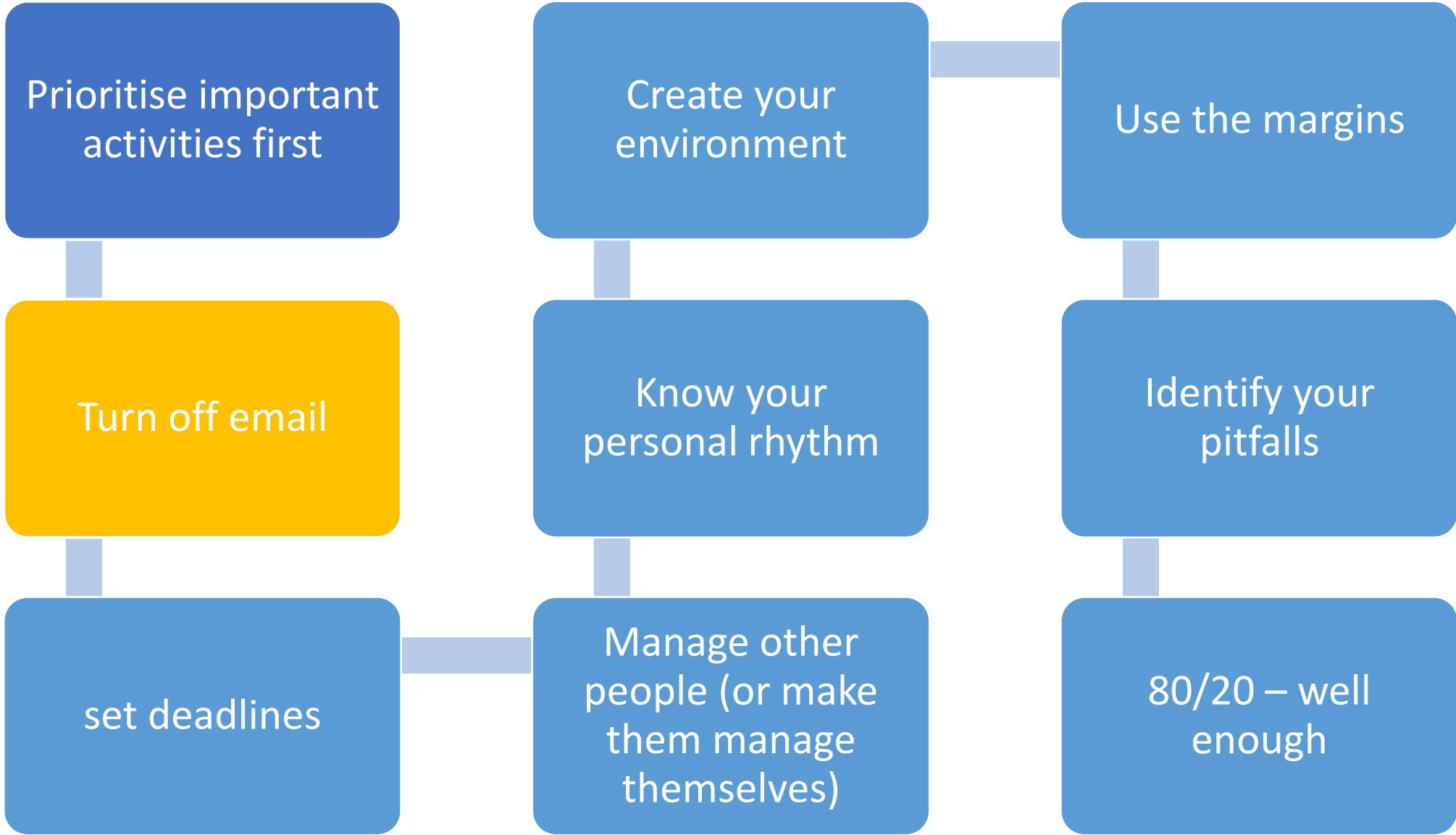
Related technique:

Johari window (self knowledge)

Eisenhower matrix (4Ds)

Ansoff matrix (risk)

Boston matrix (ROI)



email

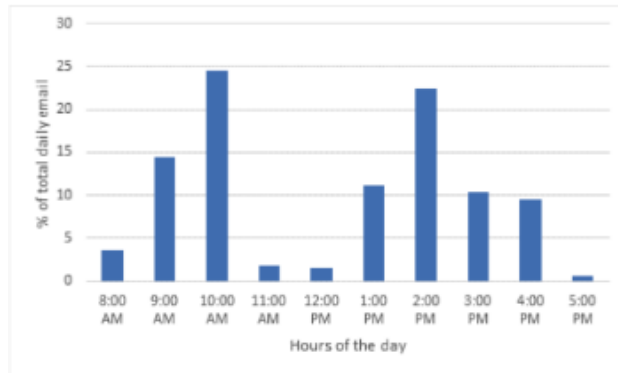


Figure 1a. Data of a user who batches email use. Y-axis shows percentage of daily email done in that hour

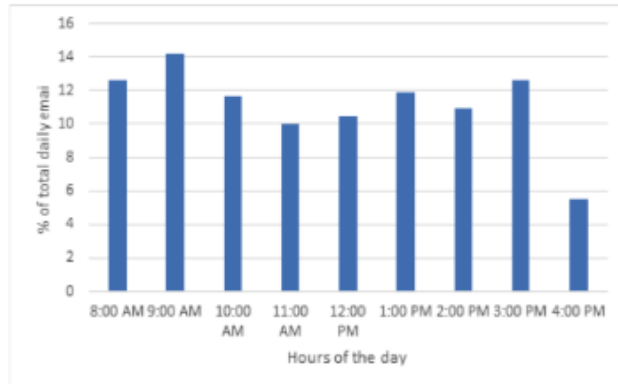


Figure 1b. Data of a user who consistently checks email.

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.

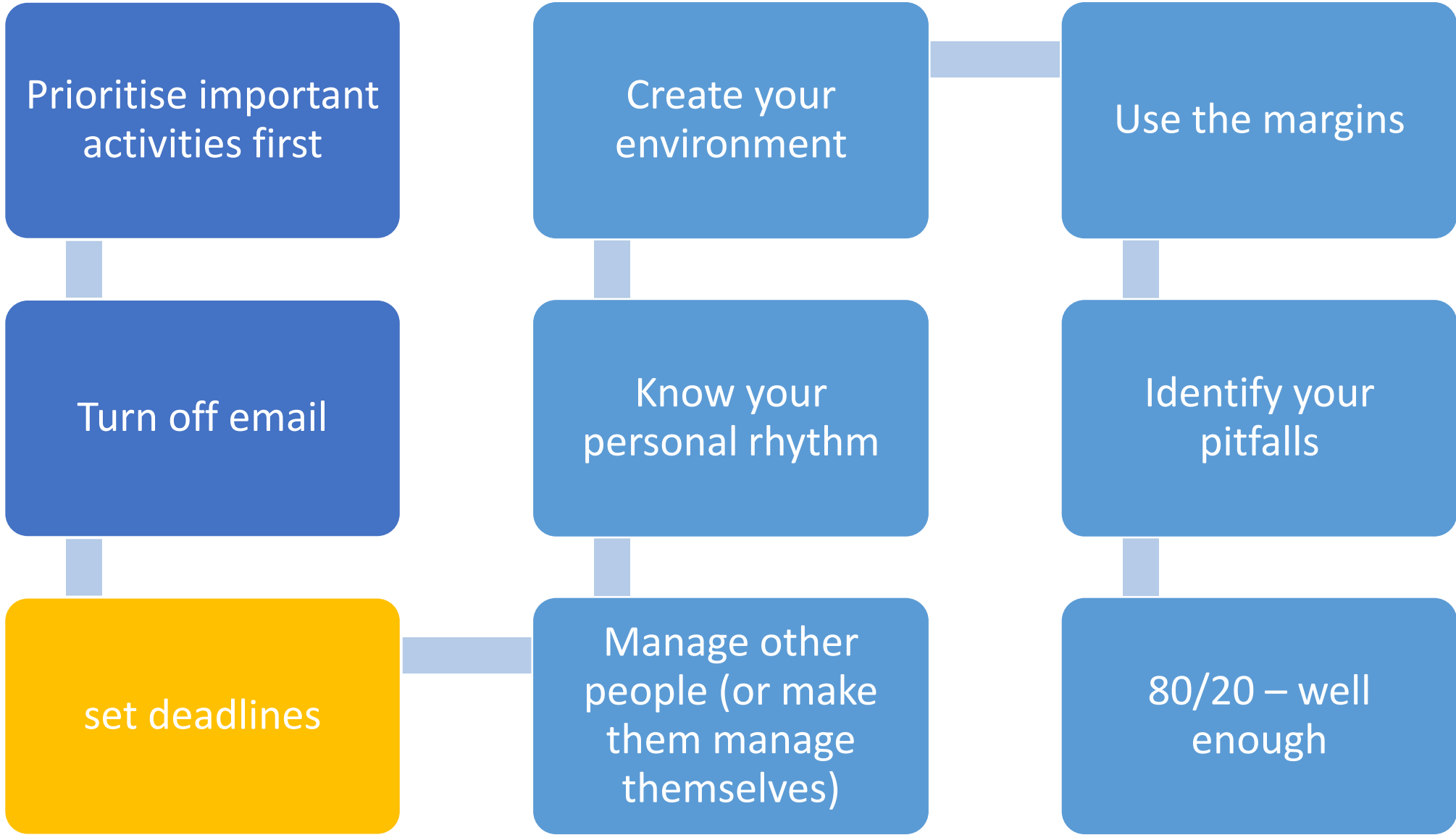
	Mean	SD	Median	Range
Total computer duration	4 hr 34 min	2 hr 23 min	4 hr 28 min	3 min - 13 hr 59 min
Total email duration	1 hr 23 min	40.49 min	1 hr 6 min	0 - 7 hr 54 min
Email checks	77.27	63.52	58.0	1 - 408

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

Longer Duration
Productivity ↓
Stress ↑

Self-interruptions
Productivity ↑
Stress –

Batching
Productivity ↑
Stress –

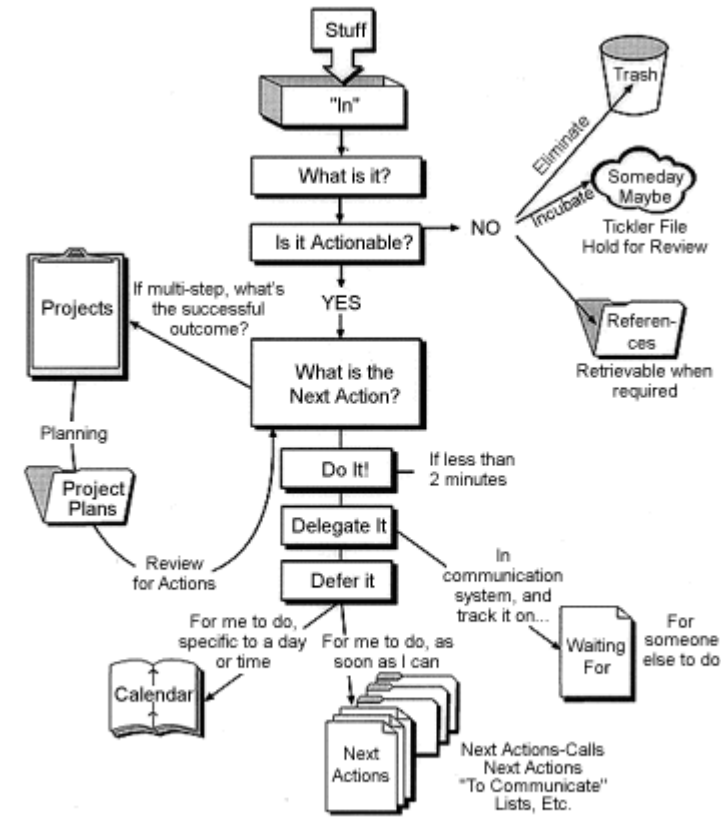
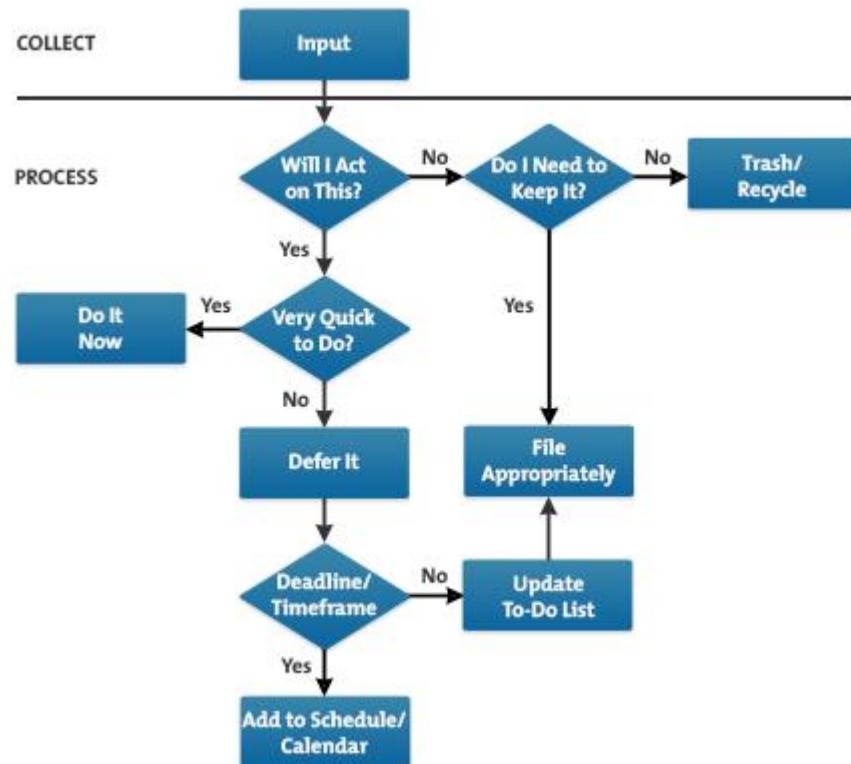


~~To Do lists~~ – Actions Programmes

- 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

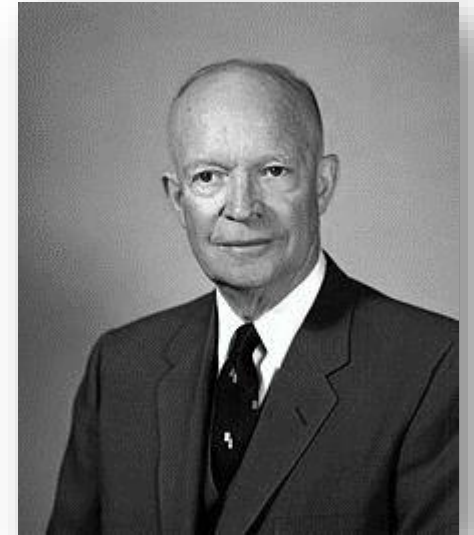
David Allen's Input Processing technique

- Getting things done (2002)



Time management Matrix

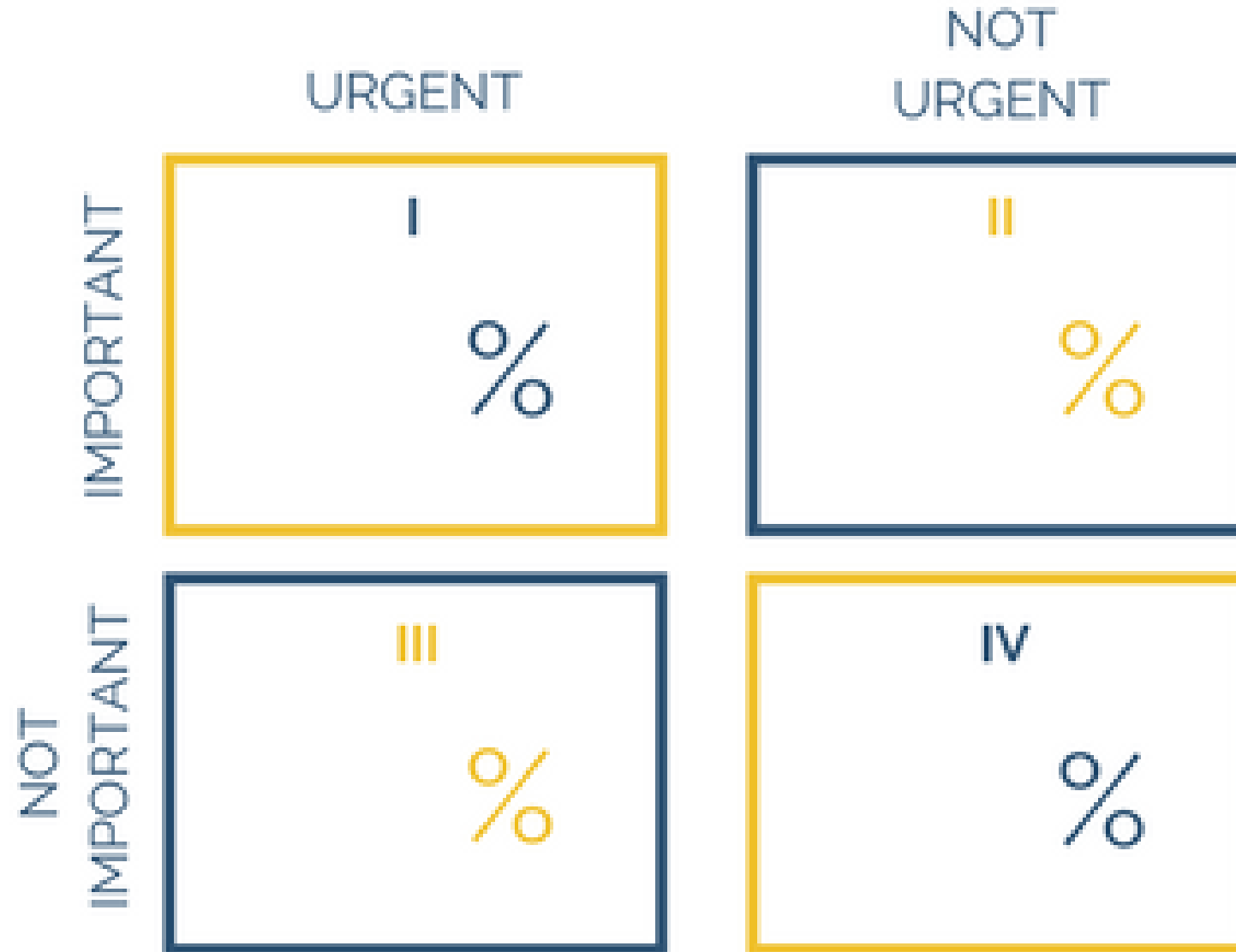
	<i>Urgent</i>	<i>Not Urgent</i>
<i>Important</i>	1	2
<i>Not Important</i>	3	4



THE URGENT VS. IMPORTANT MATRIX



MY TIME DISTRIBUTION



MY TIME JOURNAL

TIME	ACTIVITY	QUADRANT
9 - 12 am	Team Meeting	II
11 - 1 pm	Study Report	I
2 - 5 pm	Marketing Strategy	II
7 - 8 pm	Break	IV

TOTAL HOURS: 4 hrs

QUADRANT	I	II	III	IV
TOTAL HOURS/QUADRANT	1 hr	2 hrs	1 hr	0 hrs

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.

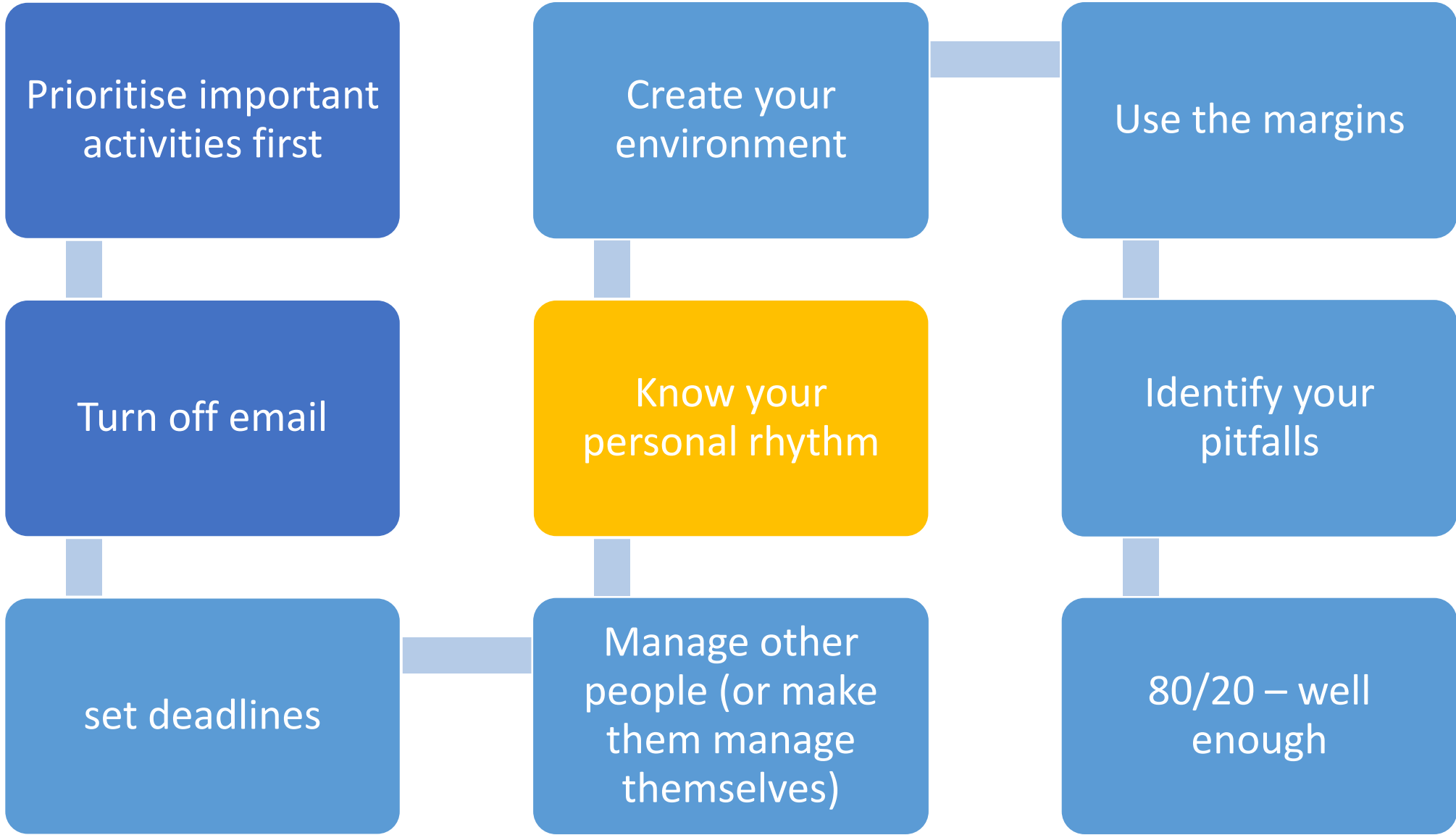
Examples

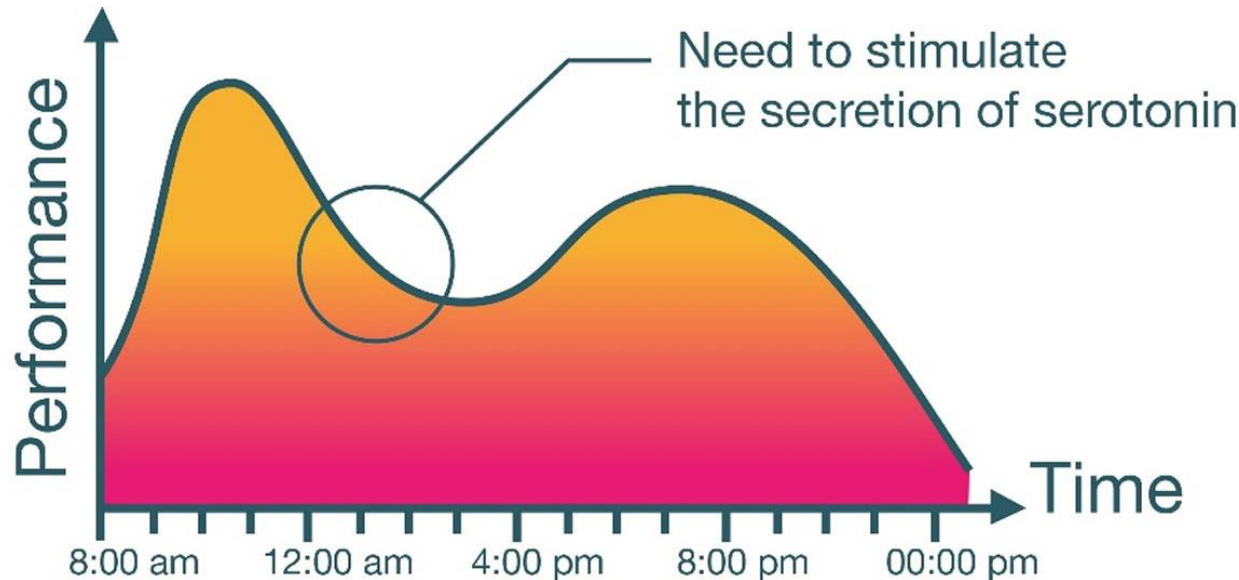
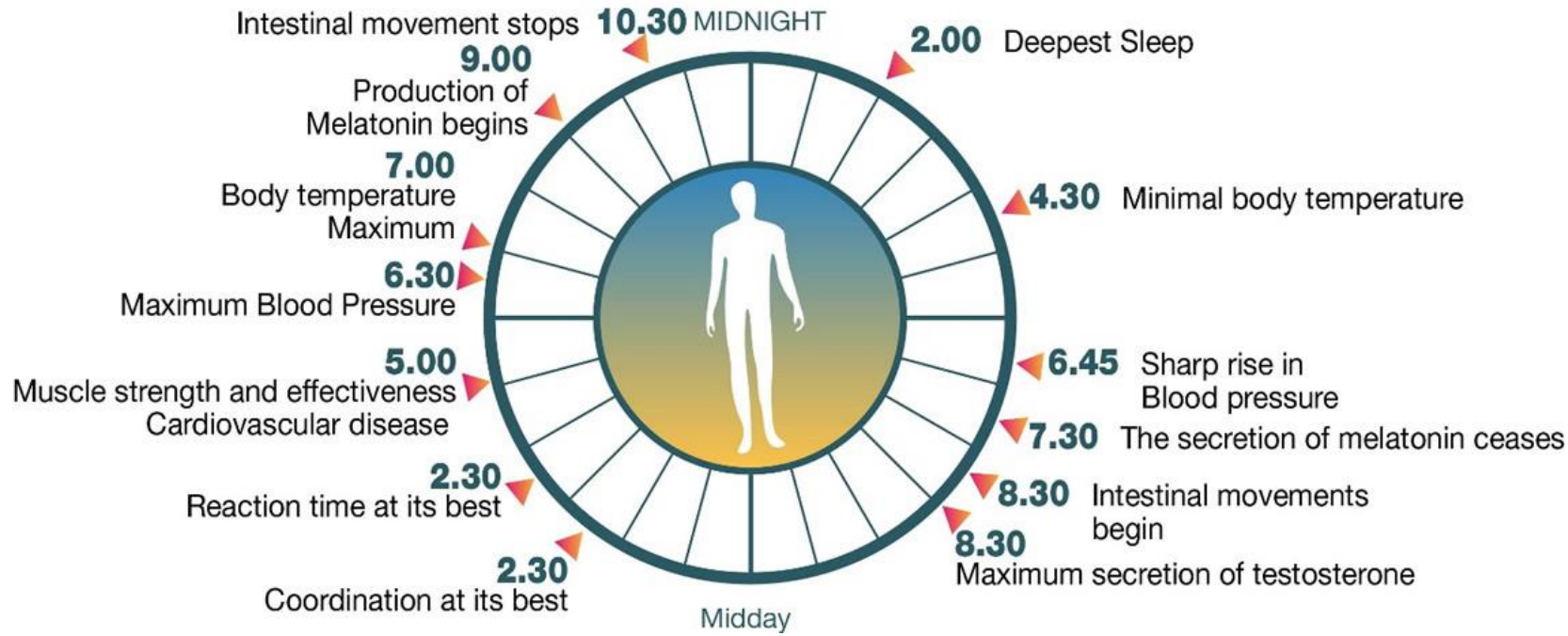
- Social media
- Watching TV
- Video games
- Eating junk food

The pomodoro technique (25-5)x4

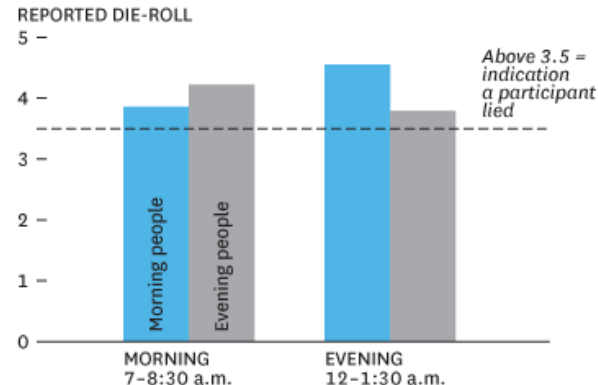
- 👍 Minimise distractions, discourages multitasking, reduced procrastination, heart health, ADD/ADHD, more lightbulb moments, better afternoon concentration (pacing)
- 👎 Distracting for some, inconsiderate of colleagues or customers, breed inflexibility







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

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.

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.

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.

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.

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.

Spleen
 Your metabolism is at a peak during this meridian 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.

PM

Heart
 Great time to eat heart healthy foods and engage socially.
 Some negative emotions that you may find yourself dealing with during this time are insecurity, abandonment, or grudging.

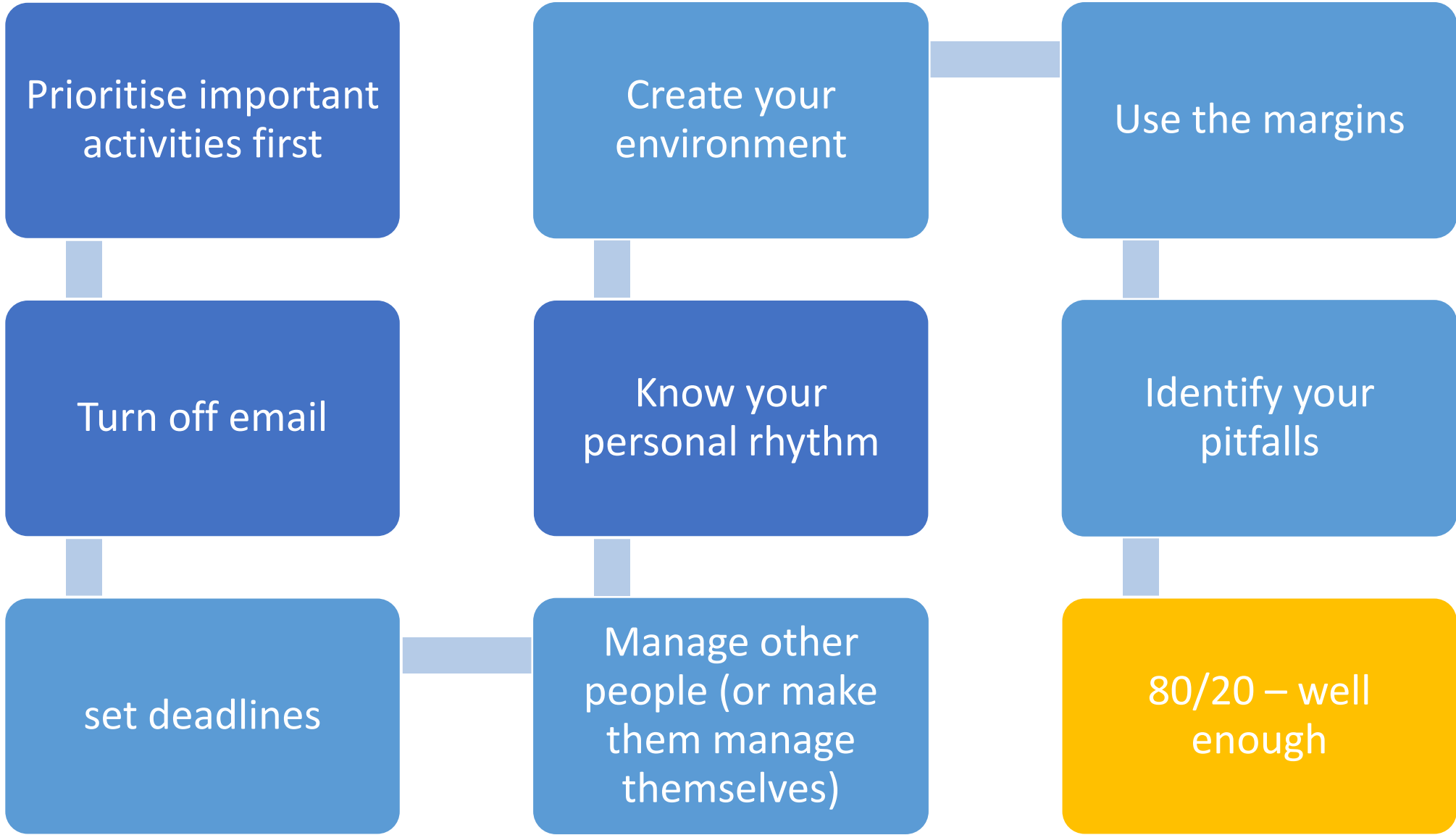
Small Intestine
 As your body is digesting lunch this is a good time to get back to work.
 Some negative emotions that you may find yourself dealing with during this time are denial, vulnerability, or lack of emotion.

Bladder
 Drink plenty of water to support your body in natural detoxing processes.
 Some negative emotions that you may find yourself dealing with during this time are fear, dread, or bad memories.

Kidney
 Eat dinner to replenish your energy and keep your kidneys from working too hard.
 Some negative emotions that you may find yourself dealing with during this time are shame, timidity, or unworthiness.

Reproductive
 Great time for intimacy or a relaxing bath to promote circulation.
 Some negative emotions that you may find yourself dealing with during this time are jealousy, muddled thoughts and feelings, or love unreturned.

Endocrine
 Avoid eating after this time in the evening and allow your body to prepare for sleep by regulating temperature and metabolism.
 Some negative emotions that you may find yourself dealing with during this time are paranoia, depletion, or nightmares.



Prioritise important activities first

Create your environment

Use the margins

Turn off email

Know your personal rhythm

Identify your pitfalls

set deadlines

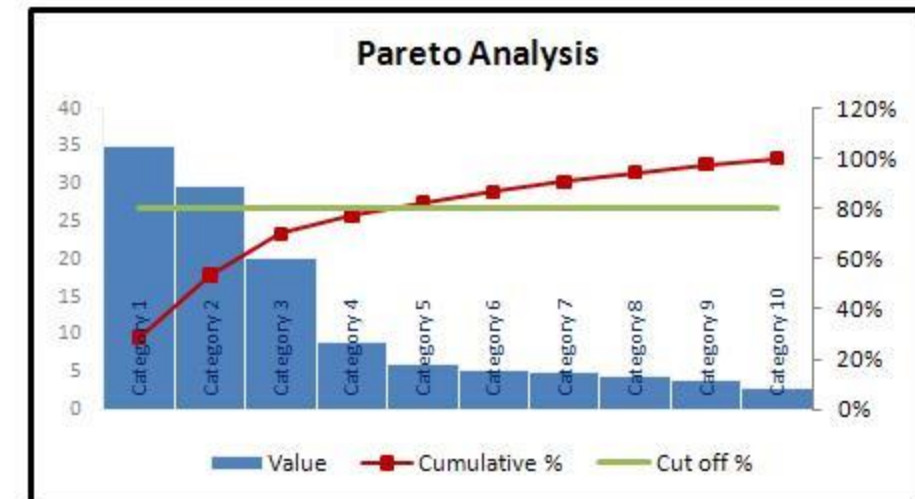
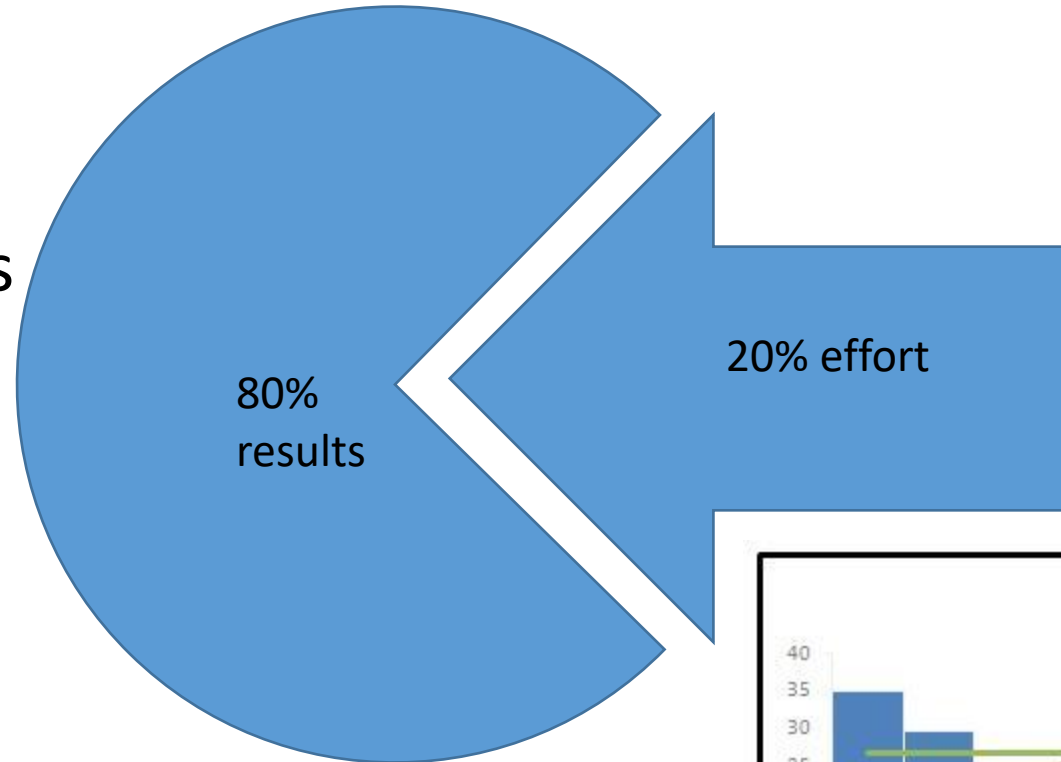
Manage other people (or make them manage themselves)

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

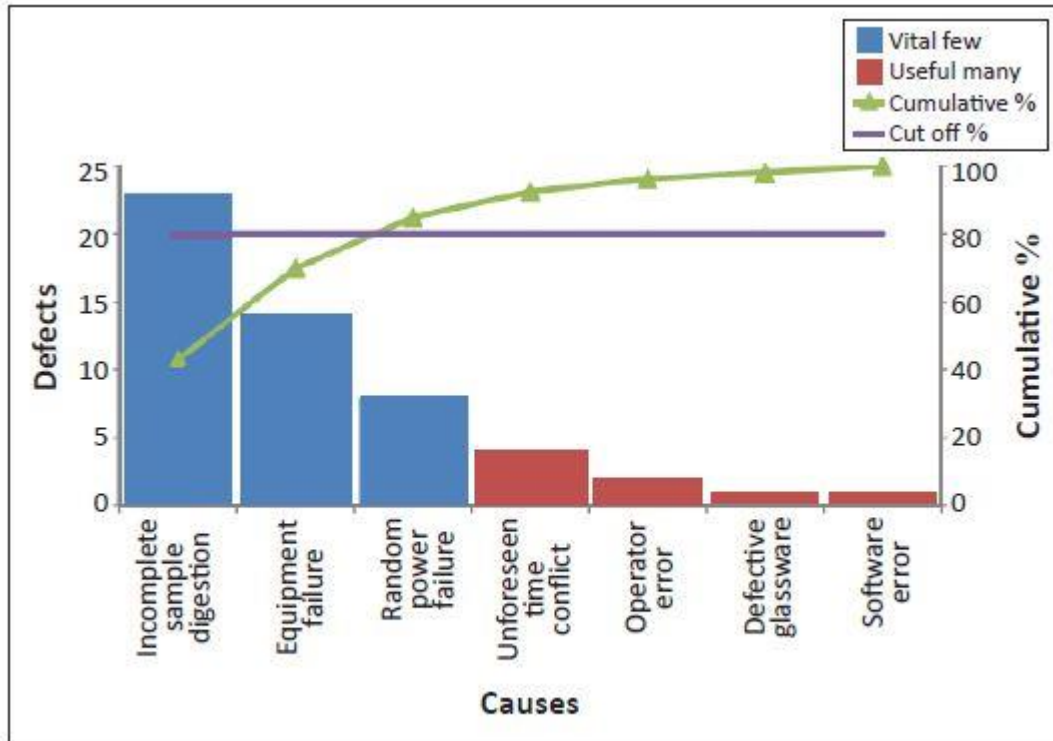


FIGURE 2: Pareto chart – Pareto analysis: Selenium analysis process.

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

Generating Ideas

For researchers



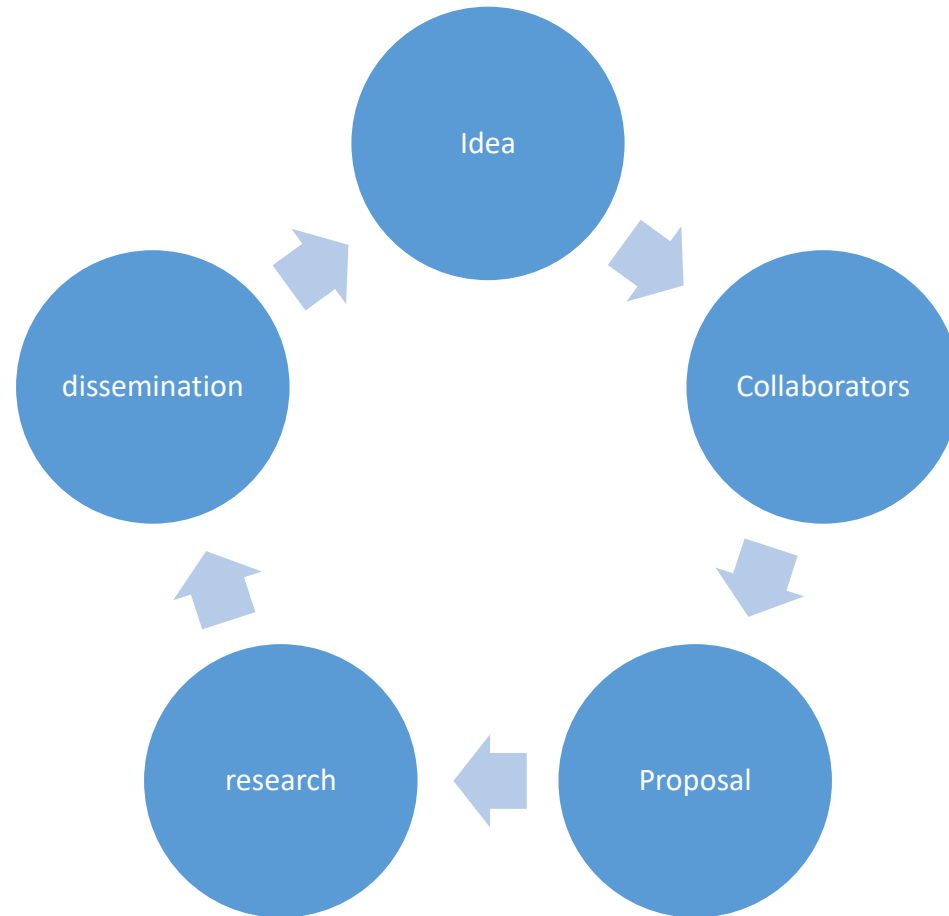
Steve Jobs

***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."*

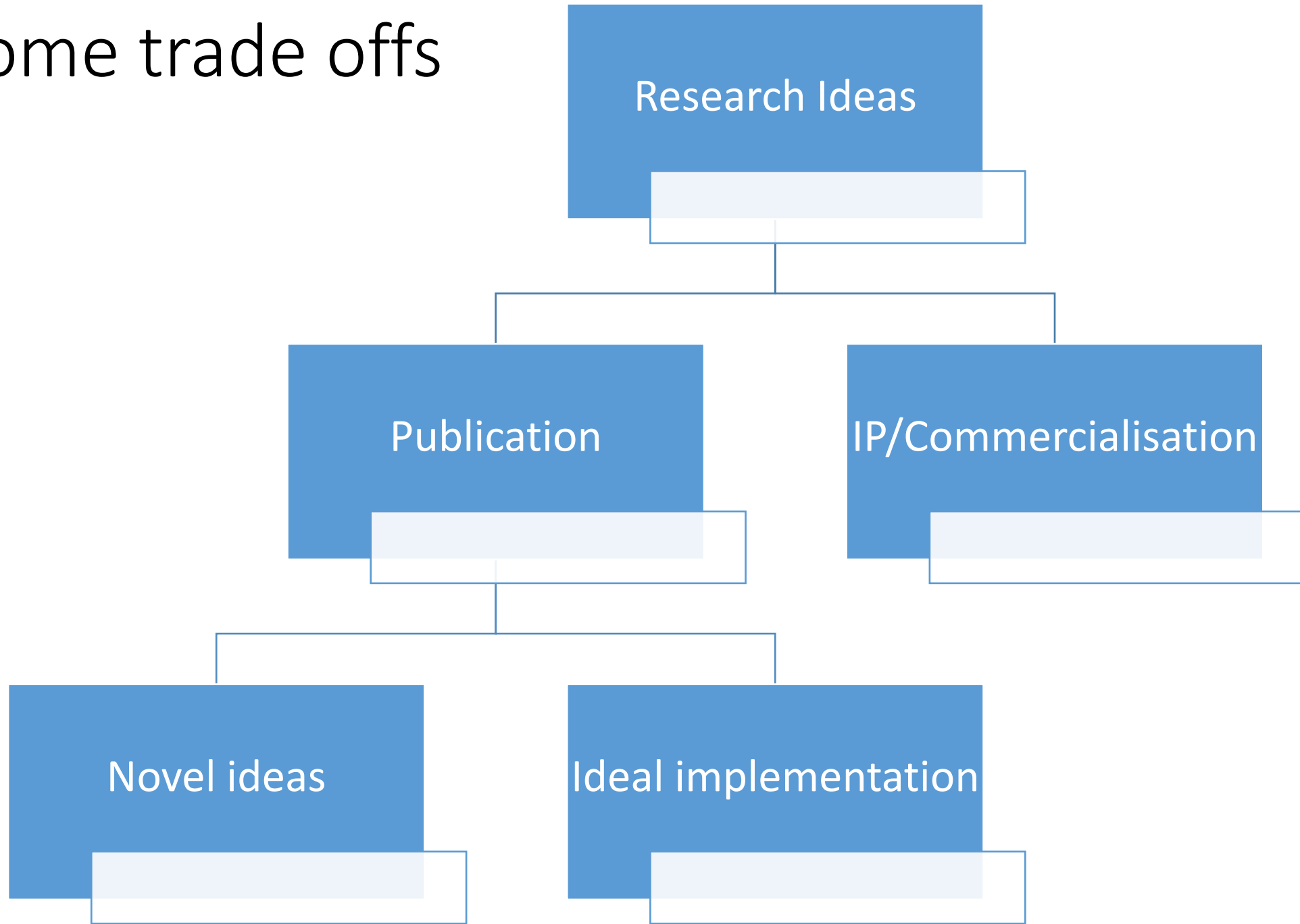
Paul Dirac

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

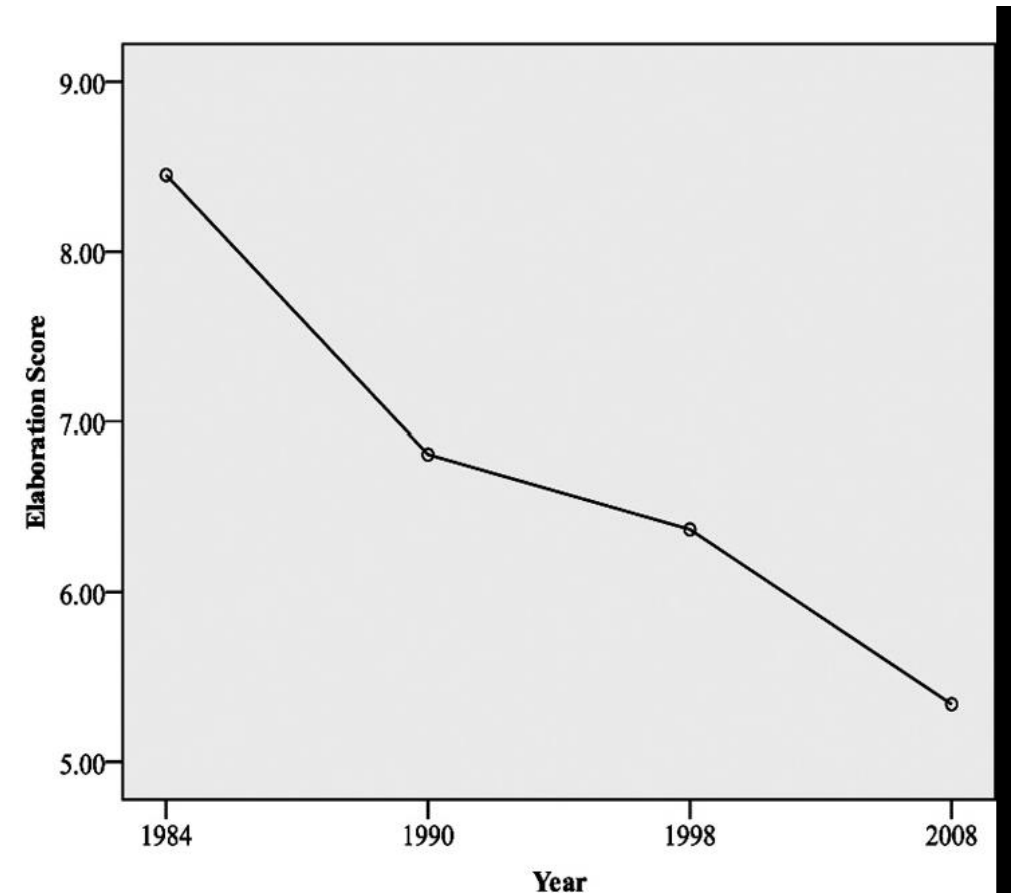
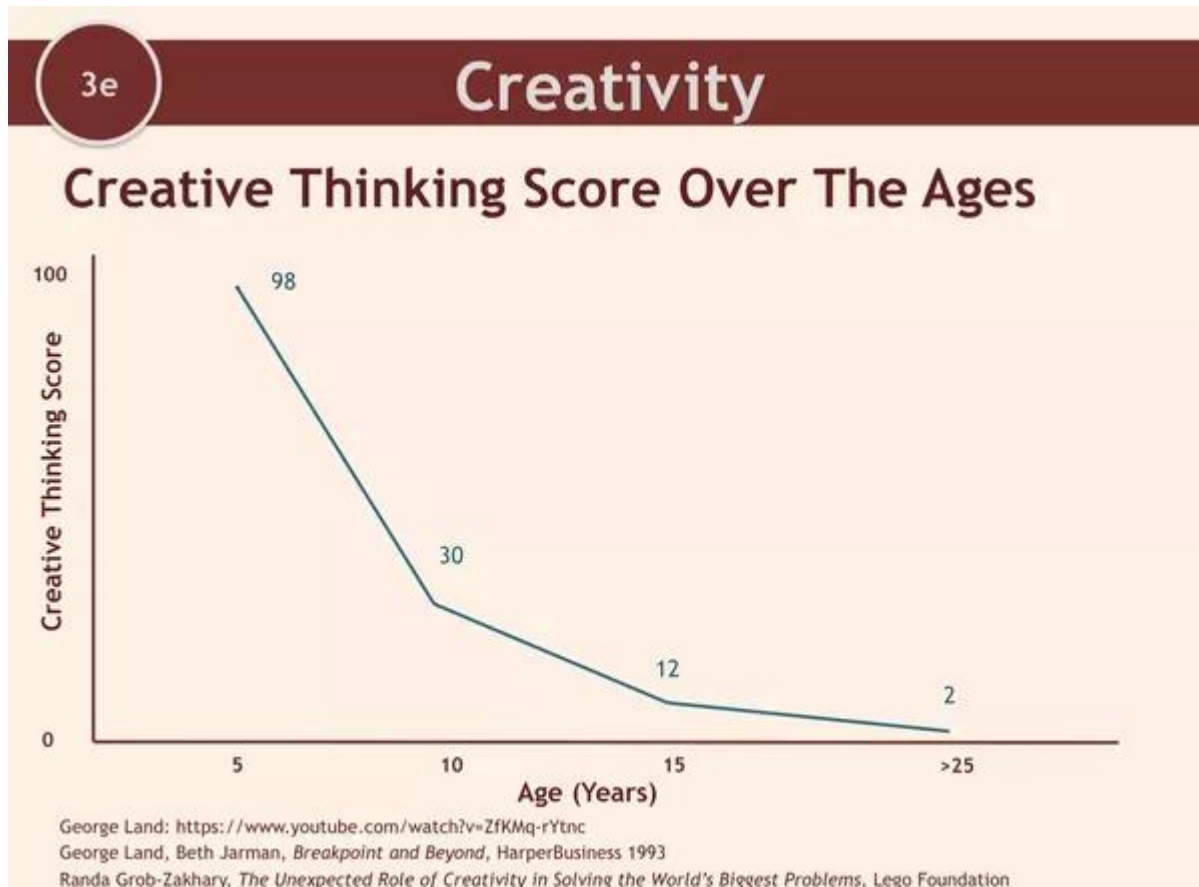


Some trade offs

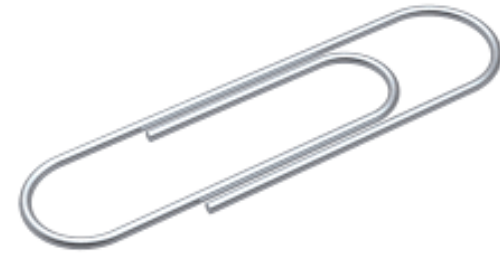


The Torrance test

- IQ, social-relational , creativity (TTCT)



Alternative uses



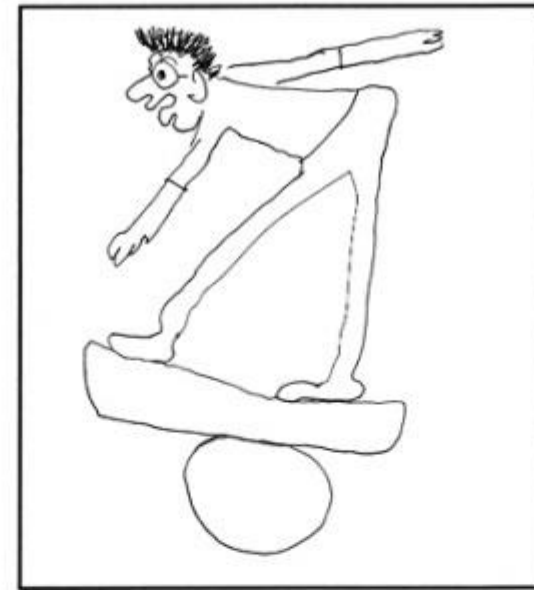
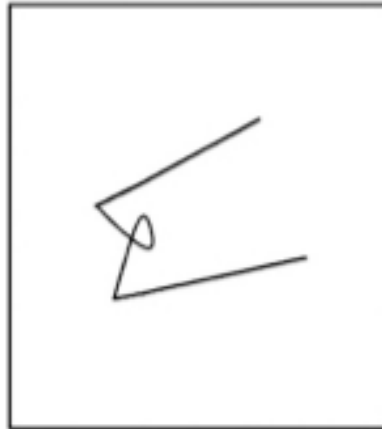
Fluency – how many uses you can come up with

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

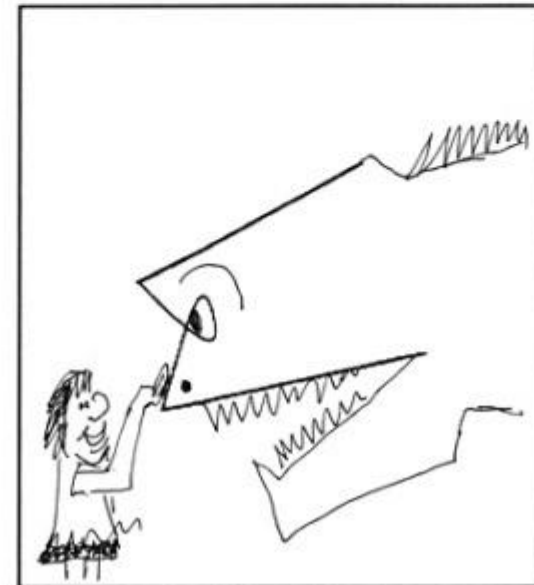
Flexibility – how many areas your answers cover (e.g. cufflinks and earrings are both accessories, aka one area)

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

Incomplete figures

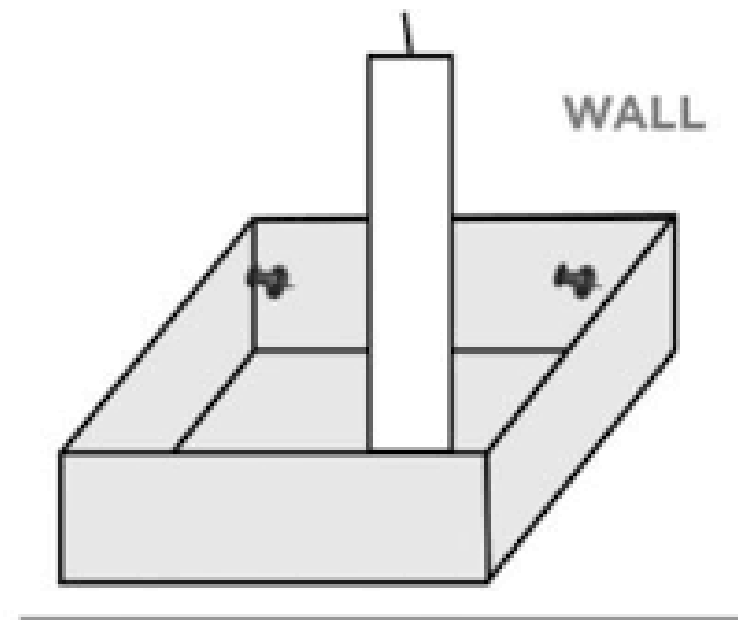
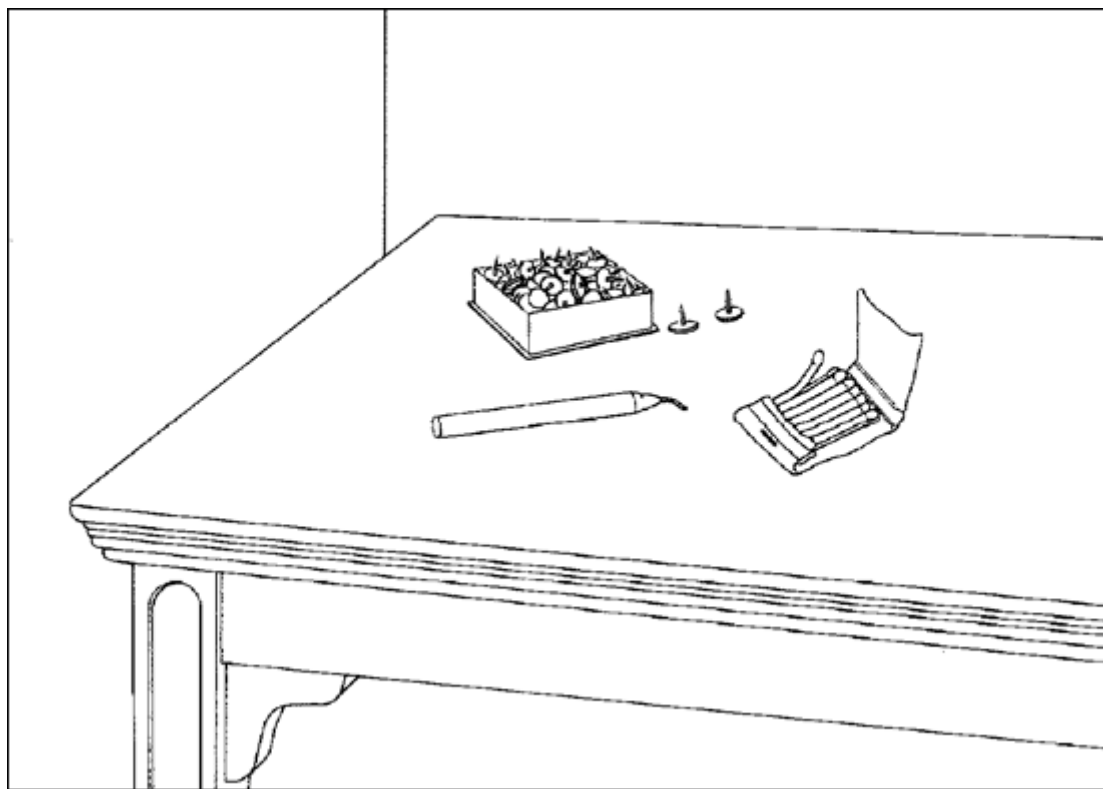


BALANCING ACT

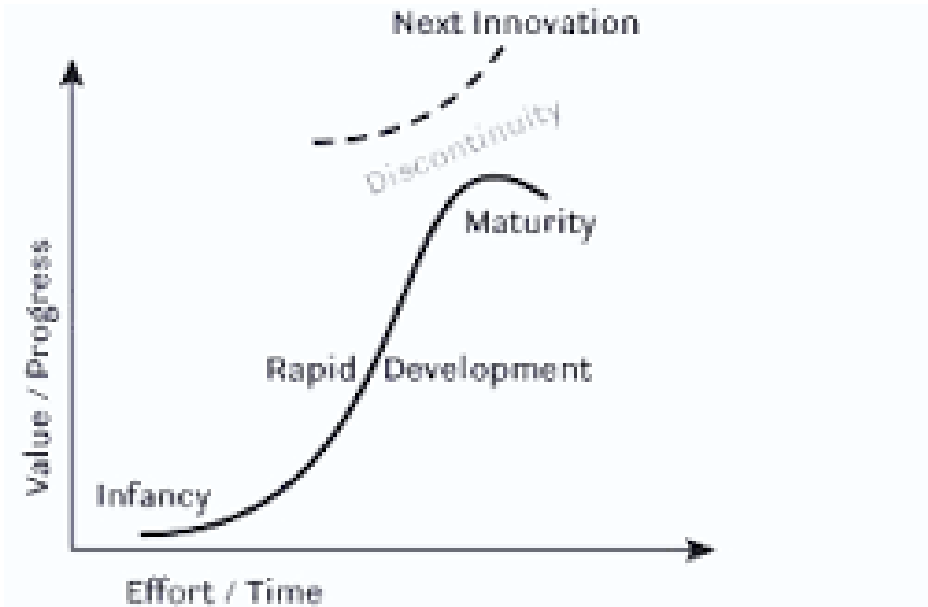


NEW FRIEND

Problem Solving



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?

SUBSTITUTE	Replace one part of the Product with another that works Better.
COMBINE	Put Different Components together to Improve a Product.
ADAPT	Update the Product to new Customer Preferences.
MODIFY	Change How the Product looks. Its Appearance and Presentation.
PUT TO ANOTHER USE	Use a Product for a Purpose for which it was not Designed.
ELIMINATE	Get rid of Parts that are almost useless or not Valued by Clients.
REVERSE	Deconstruct the Product or Re-Think some of its main Pillars.



FINER – selecting a topic from 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