



Workshop

Design behavioral
interventions

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Part of slides from:
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UCL Centre for Behaviour Change

Health behaviours

- Physical activity
- Healthy diet
- Alcohol reduction
- Smoking cessation
- Drug misuse
- Sexual health behaviours
- Safety behaviours (e.g., bike helmets, lifting objects)
- Illness screening (e.g., mammograms)
- Sunscreen use and sun protection
- Adherence to prescribed medication
- Adherence to rehabilitation programs

When it comes to changing behaviour.....

we all behave and see others behave

and have our own theories about how to change behaviour

...

BUT we can be wrong!

There is a science of behaviour change but it is not always applied...

Many interventions designed according to The principle of intervention design...

It **S**eemed **L**ike **A G**ood **I**dea **A**t **T**he **T**ime



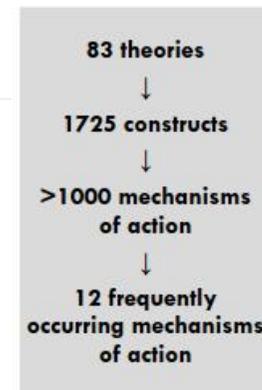
When we design interventions to change behaviour we need to understand the causal factors

1. Examine the problem or do a behavioural analysis

Method not magic bullet!

2. Make a behavioural diagnosis
3. Prescribe a treatment or design an intervention based on the behavioural diagnosis

Designing Behavioral Interventions Science



More than **200** Behaviour Change Experts from **16 countries** expressed interest in participating in our Expert Consensus Study

<http://www.ucl.ac.uk/behaviour-change-techniques>

What do we mean by 'behaviour'?

Agreed across disciplines of psychology, sociology, anthropology and economics

- *"Anything a person does in response to internal or external events"*
- *Actions may be*
 - *overt (motor or verbal) and directly measurable, or*
 - *covert (activities not viewable but involving voluntary muscles) and indirectly measurable;*
- *behaviours are physical events that occur in the body and are controlled by the brain"*

Hobbs, Campbell, Hildon, & Michie, 2011

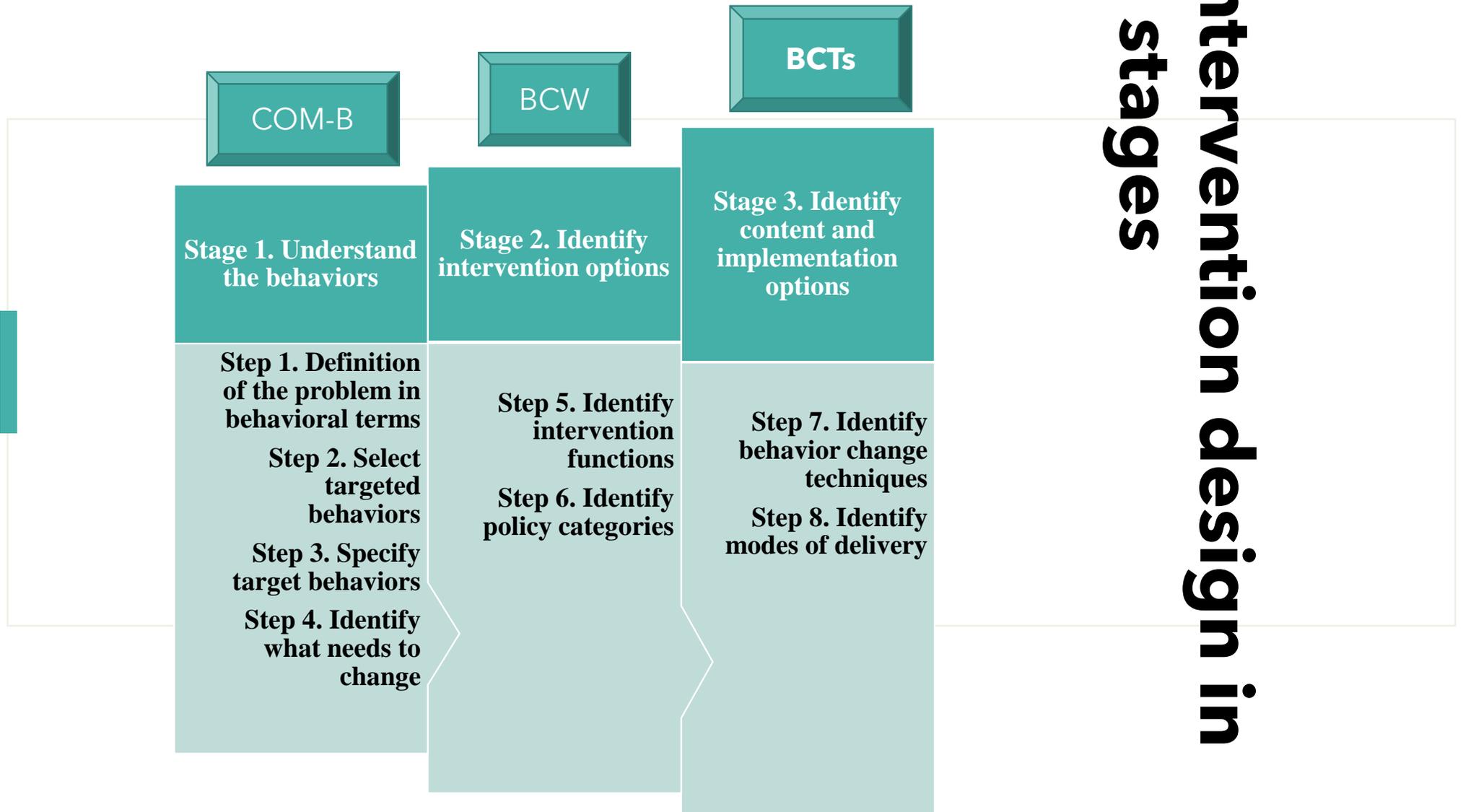


Is this a behaviour?



- 1) Walking in the park
- 2) Having the confidence to start weight lift
- 3) Taking an antidepressant tablet
- 4) Losing weight
- 5) Demonstrating stretching to a an older person
- 6) Intending to eat 3 pieces of fruit a day
- 7) Reading to a child
- 8) Feeling less depressed

Intervention design in 3 stages

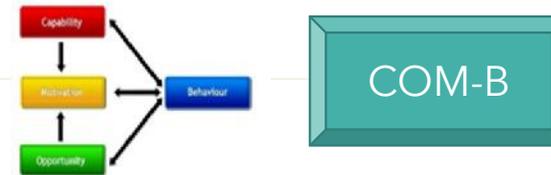


THE toolbox:



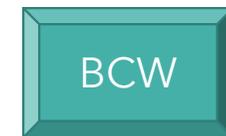
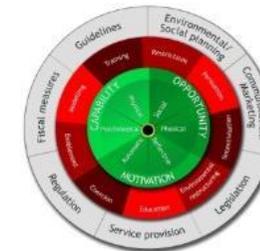
- Start by understanding the behaviour

- Behavioural analysis and diagnosis using **COM-B**



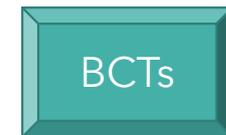
- Systematically select appropriate intervention functions and policy categories to bring about change

- Design the intervention ('prescribed treatment') using **BCW** based on the behavioural diagnosis



- Specify active ingredients in the intervention

- Using **BCT** Taxonomy



Stage 1. Understand the behaviors

Step 1. Definition of the problem in behavioral terms

Step 2. Select targeted behaviors

Step 3. Specify target behaviors

Step 4. Identify what needs to change

Step 1. Definition of the problem in behavioral terms

- Step 1: What do we want the person / group of people to do? Specify behaviour



Remember...

In order to achieve the outcomes you want, be clear about whose behaviour you want to change...

- Child?
- Parent?
- Health professional?
- All three?

Which behaviours to target?

- Identify key specific behaviours
 - **Who** needs to do
 - **what** differently,
 - **when**,
 - **where**,
 - **how**?
 - Behaviours are often dependent on or influenced by other behaviours
 - One's own
 - Other people's



Let's start Thinking Behaviourally...

Health problem

Cardiovascular disease

Behaviour(s)

Physical activity

Healthy eating

Adherence to prescribed
medication

Smoking cessation

Thinking Behaviourally...

Health problem	Behaviour(s)	Who needs to Change?
Cardiovascular disease	Physical activity Healthy eating Adherence to prescribed medication Smoking cessation	Q: ?

5 min

Form 1 Definitions of behaviours

What behaviour?	Where this behaviour occurs?	Who is involved in performing the behavior?
Behaviour A.		
Behaviour B.		

Step 2. Select targeted behaviors

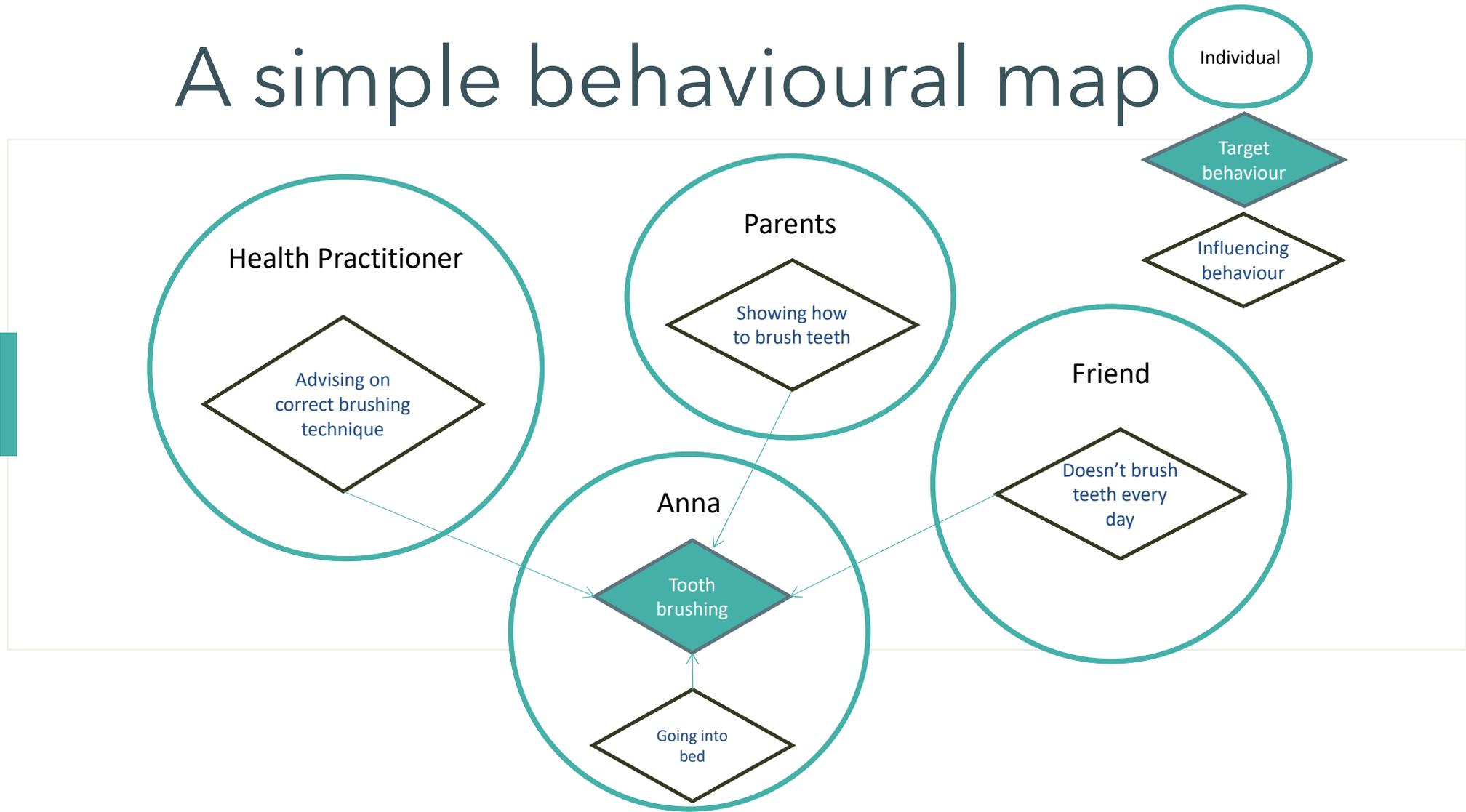


Which behaviours to target?

Consider...

- Likely **impact** if undertaken
- Likelihood that such a behaviour will be **implemented**:
 - How easy is it to do?
 - Does it cost a lot of money? Time?
 - Will people like doing it?
- **Spill over** to overt behaviours and people
 - Every behaviour is within a network of behaviours within each person - and every person is within a network of other people

A simple behavioural map



Potential relevant target behaviours	Impact of behavior change	Likelihood of changing behavior	"Spill over score"	Measurement score
	The likely impact if the behaviour were to be changed.	How easy it is likely to be to change the behaviour.	The centrality of the behaviour in the system of behaviours. The positive spill over effect if that behaviour were to be changed. If the change of this behaviour is likely to have an impact to other behaviours.	Ease of measurement: If one wishes to evaluate the extent to which the intervention has changed the target behavior/participation, it should be measurable. How well each item measures the behaviour/participation?
Behaviour A.				
Behaviour B.				

5 min

Form 2 Priorities

Step 3. Specify target behaviors



Target behaviour	WHO needs to perform the behavior?	WHAT do they need to do differently to achieve the change?	WHEN do they need to do it?	WHERE do they need to do it?	HOW OFTEN do they need to do it?	WITH WHOM do they need to do it?
Behaviour A.						
Behaviour B.						



5 min

Form 3 specification

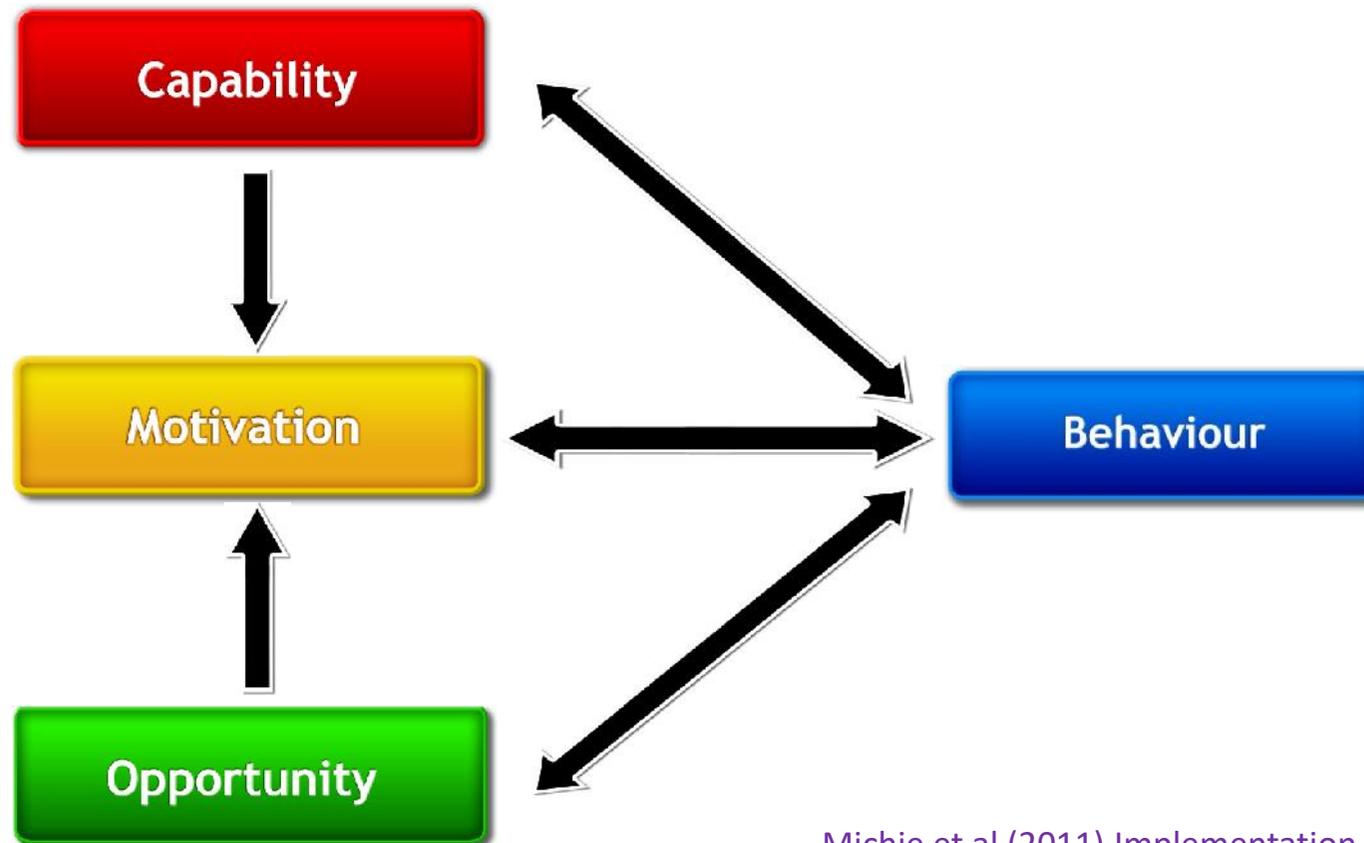
Step 4. Identify what needs to change

Step 4: How are we going to get them to do it? Intervention design

Using the COM-B model as a starting point for intervention design

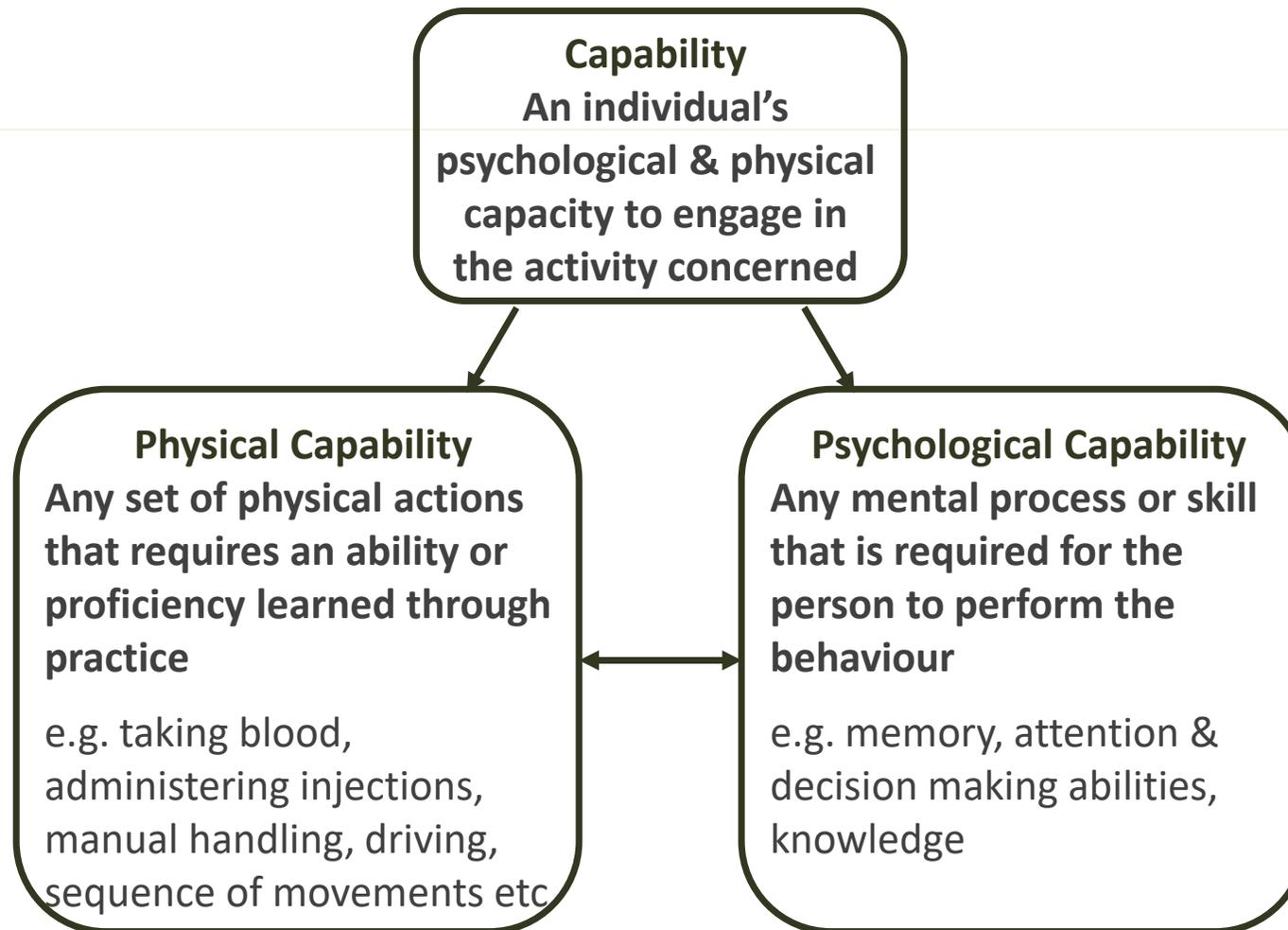
- Design of a weight management smartphone “app” for parents of overweight children
- Focus groups were conducted with parents of overweight children - questions were framed using COM-B model components
- Target behaviour - **Providing appropriate portion sizes across the five food groups**

The COM-B model: Behaviour occurs as an interaction between three necessary conditions



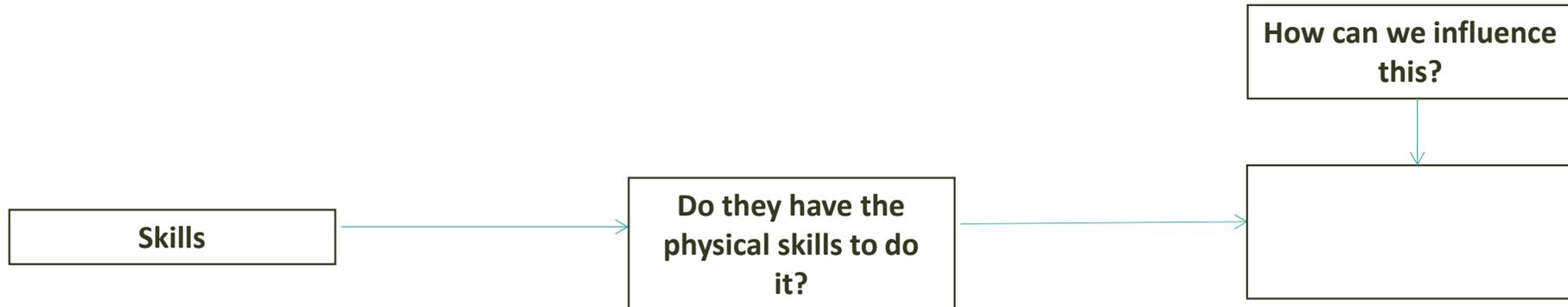
Michie et al (2011) Implementation Science

Defining Capability



Different Elements of Capability

**Domain of Physical
capability**



Different Elements of Capability

Sub-Domains of Psychological capability

Knowledge

Do they know why they need to do it and how to do it?

Cognitive

Do they have the mental ability to do it?

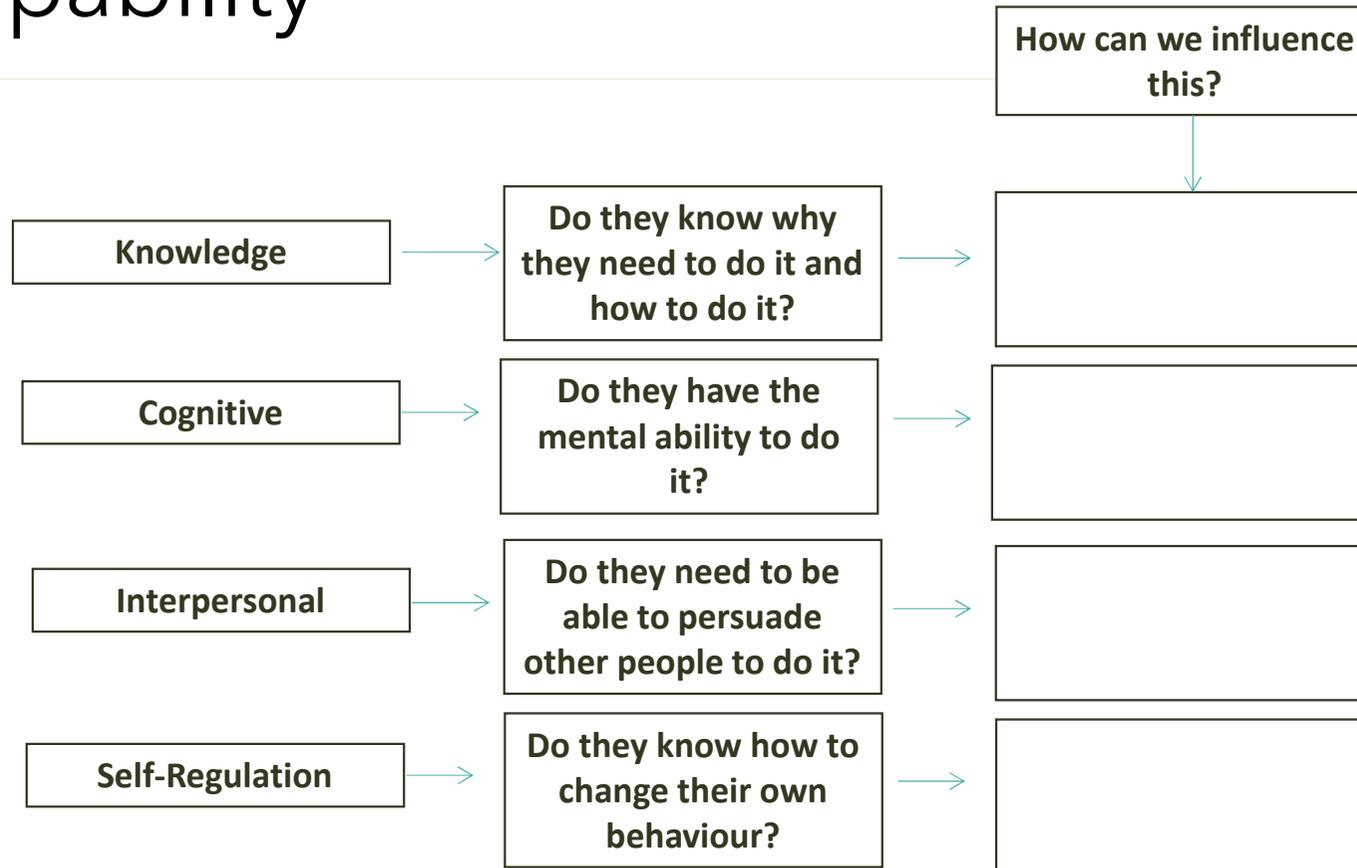
Interpersonal

Do they need to be able to persuade other people to do it?

Self-Regulation

Do they know how to change their own behaviour?

Changing behaviour by increasing capability

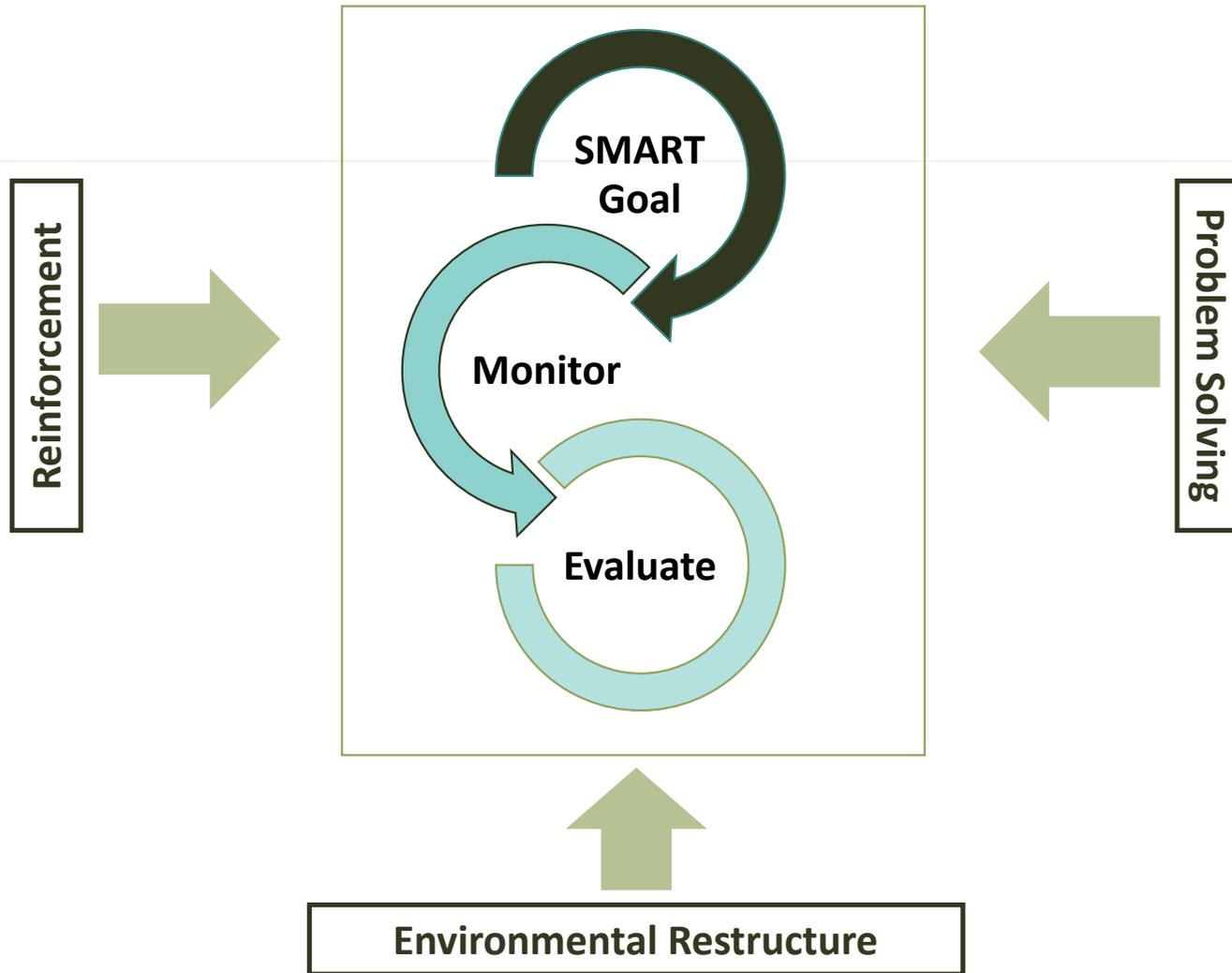




Capability: Self-Regulation

- The processes involved in deliberate & conscious regulation of personal behaviour
- Underpins most chronic disease 'self-management' programmes
- Can be used to structure interventions with clients
- Clients can also be taught to apply the principles to themselves

Capability: Self-Regulation





SMART Goal Setting

- **S**pecific

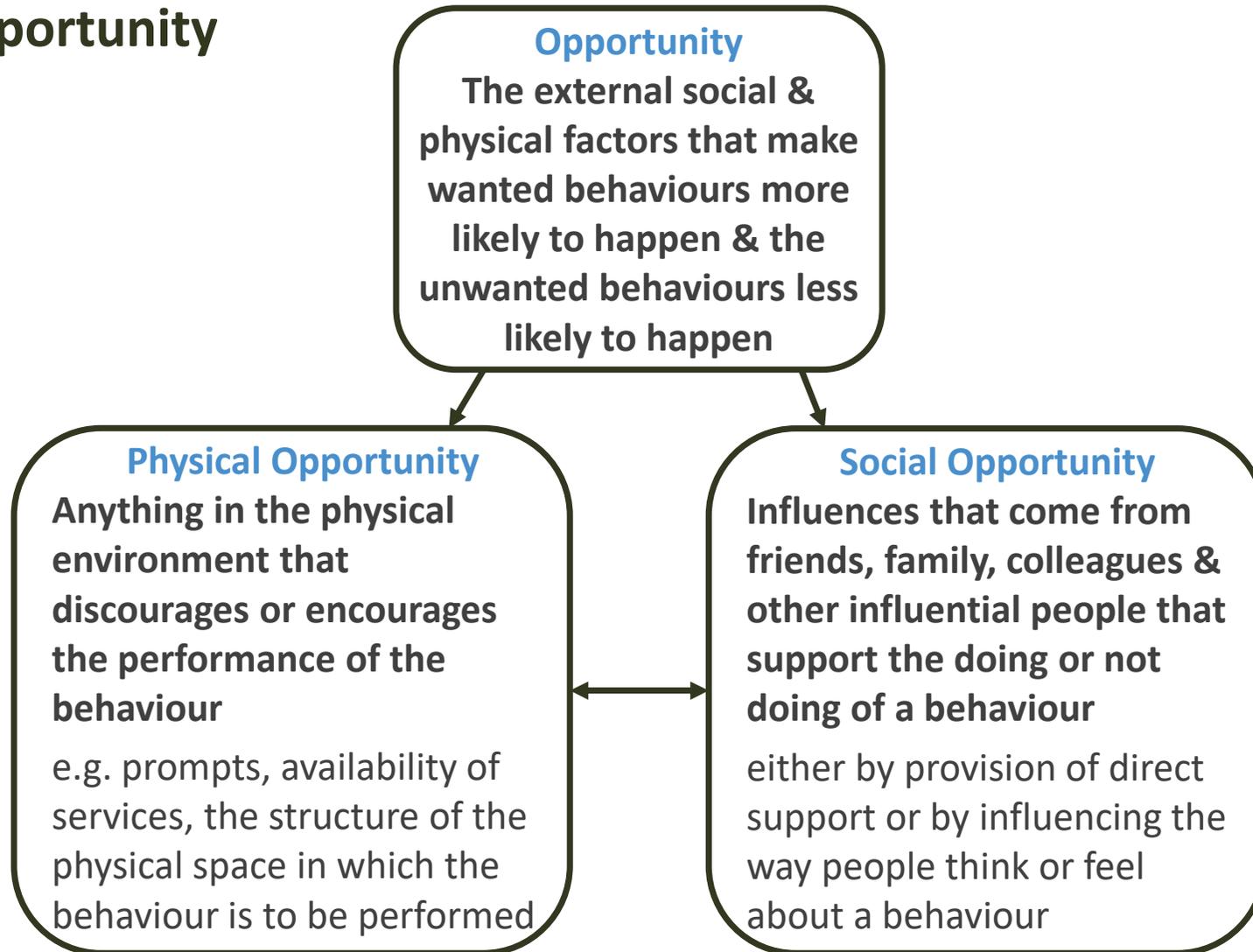
- **M**easurable

- **A**chievable

- **R**elevant

- **T**imely

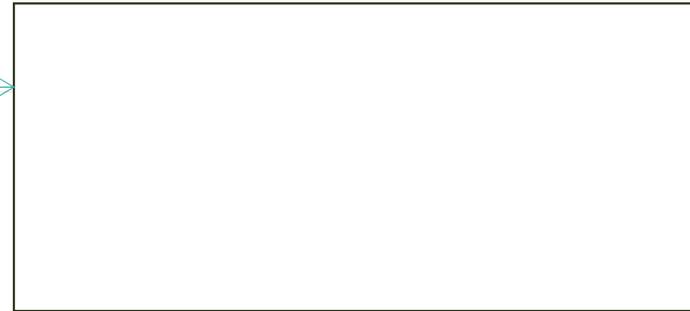
Opportunity



Unpacking physical opportunity: diagnosis

Triggers and Prompts

What is triggering the behaviour
in the external environment?



An empty rectangular box with a black border, intended for notes related to the 'Triggers and Prompts' section.

Space and Time

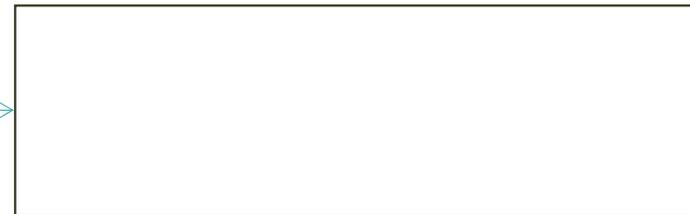
What resources are influencing
the expression of the
behaviour?



An empty rectangular box with a black border, intended for notes related to the 'Space and Time' section.

Objects / Services / Location

What are the environmental
influences on the behaviour?

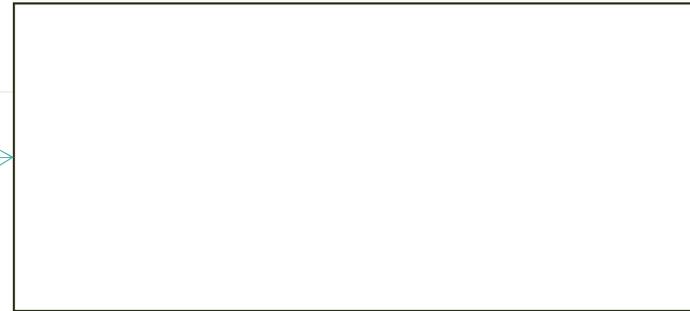


An empty rectangular box with a black border, intended for notes related to the 'Objects / Services / Location' section.

Unpacking physical opportunity: intervention

Triggers and Prompts

How can you remind people to do or not do the behaviour?
How can you add in triggers for wanted behaviour, remove triggers for unwanted behaviour.



Space and Time

Do people need extra space or time to do the behaviour? Or not do the behaviour?



Objects / Services / Location

Do people need access to objects, technology or services in order to do the behaviour?



Unpacking social opportunity: diagnosis

Peer Pressure

How is this behaviour influenced by the behaviours of others around them?

Peer Pressure

Norms around behaviour

What are the norms for this behaviour?

Norms around behaviour

Credible Models

Who is modelling this behaviour?

Credible Models

Culture

What are the cultural and linguistic resources influencing or enabling expression of the behaviour?

Culture

Unpacking social opportunity: intervention

Peer Pressure

Can people be influenced by being exposed to other peoples behaviour? Within the family, within the social network, within the neighbourhood?

Peer Pressure

Norms around behaviour

People do what they perceive others to be doing.

Norms around behaviour

Credible Models

Can you expose them to 'people like me' or 'aspirational' figures who are doing the behaviour?

Credible Models

Culture

Thought or behavioural leaders?

Culture

Motivation

Motivation

Everything that makes a person do what they do; anything that energises and directs behaviour. Motivation is commonly thought of as the 'reasons' for doing something.

Reflective motivation

Beliefs about what is good and bad, conscious intentions, decisions and plans

Automatic motivation

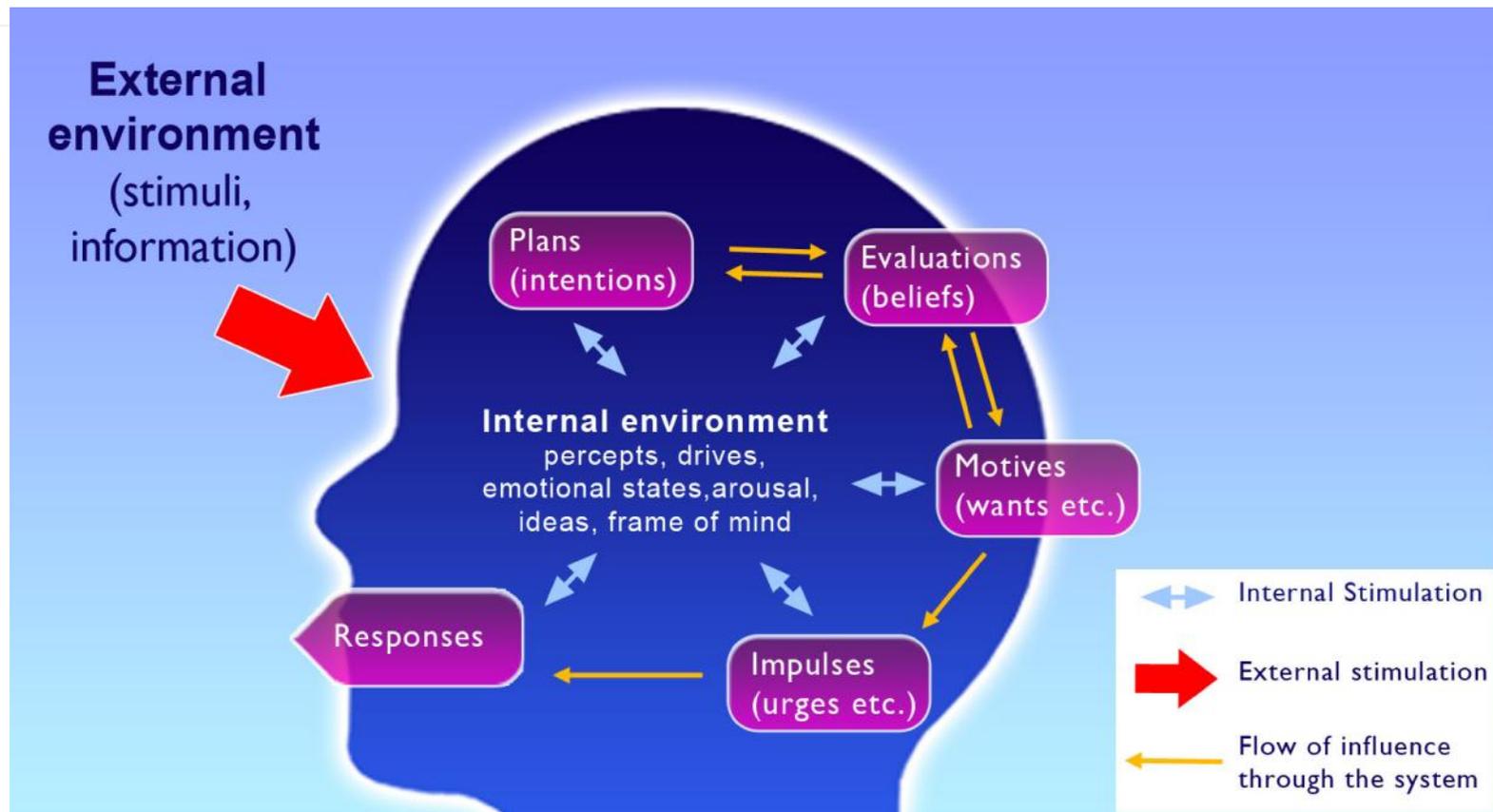
Emotional responses, desires and habits resulting from associative learning and physiological states



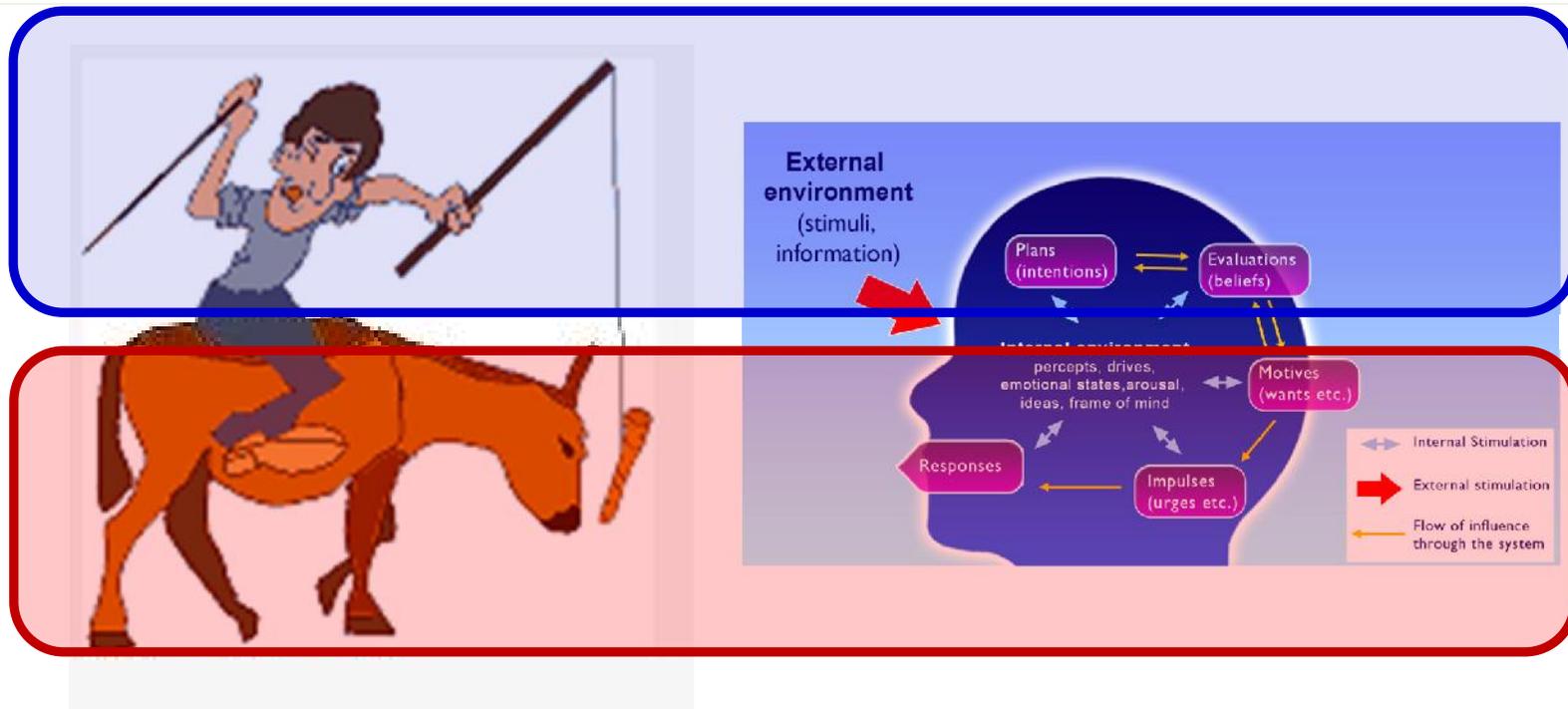
What is motivation?

- Motivation is commonly thought of as the 'reasons' for doing something.
- This implies it is a largely 'cognitive' activity; conscious and reflective.
- Motivation is better defined as everything that makes a person do what they do; anything that energises and directs behaviour.
- Conscious reflection is part of motivation, but not reducible to it.
- Behaviour is the product of the motivational state of the organism at any given moment.
- Motivational state is a moment-by-moment property which is shaped by different systems of influence: physiological, impulses and inhibitions, motives, beliefs, and identity.

PRIME Theory and the structure of human motivation



The rider and the donkey





Reflective

**Beliefs about what
is good and bad,
conscious intentions,
decisions and plans**

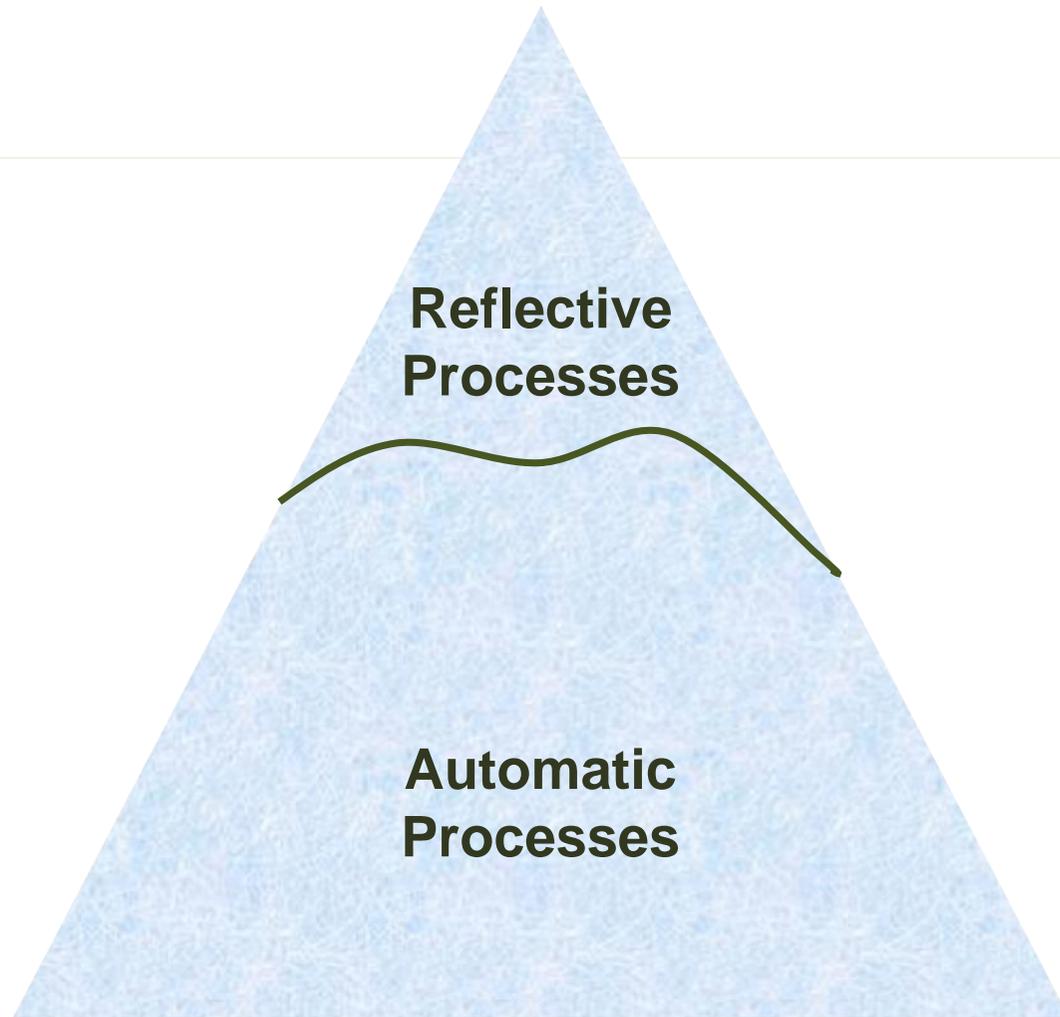
Automatic

**Emotional responses,
desires and habits
resulting from
associative learning and
physiological states**

PRIME Theory

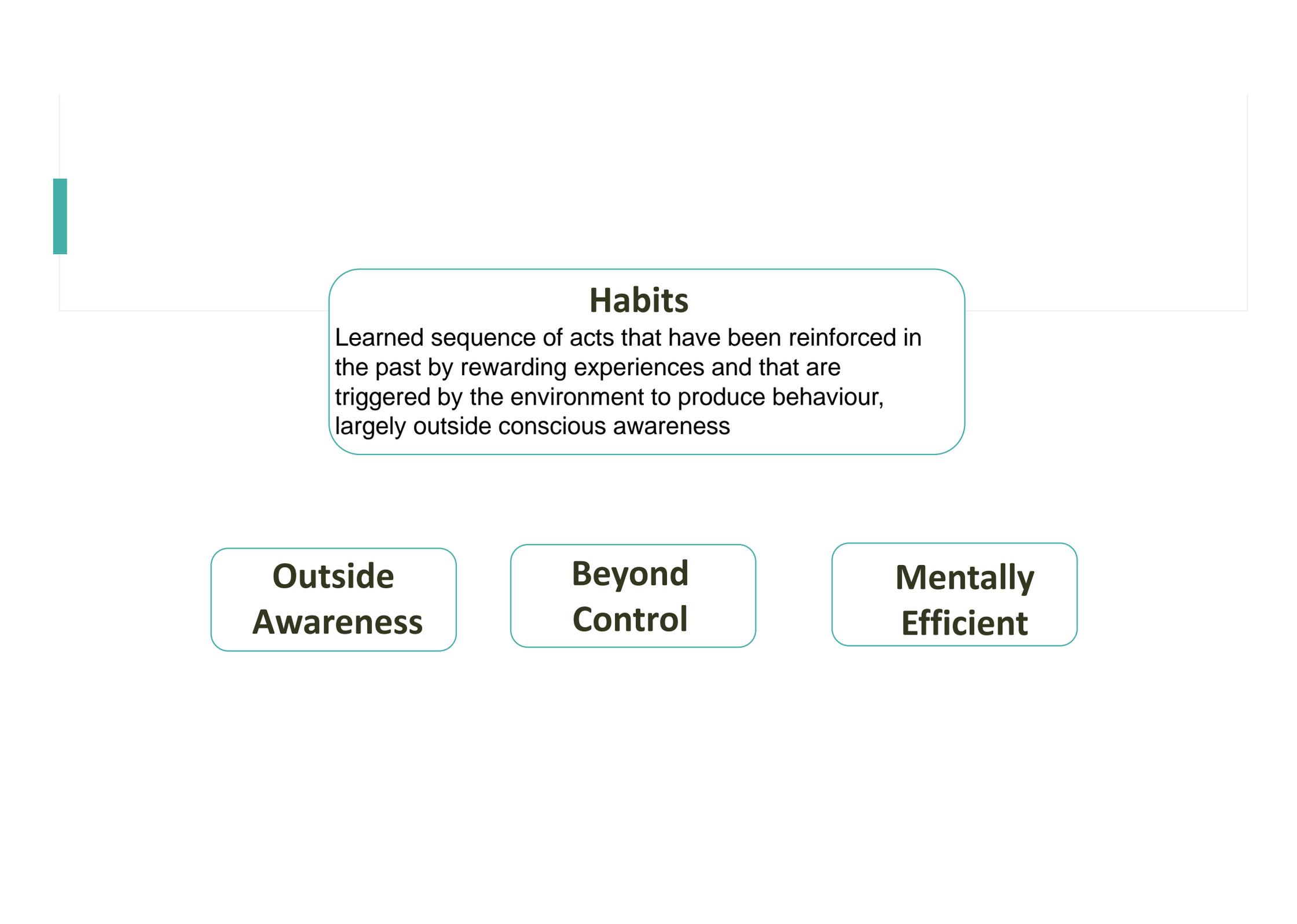
- **Conscious**

- **Unconscious**



A thought experiment

- Did you brush your teeth this morning?
- Do you remember telling yourself to brush your teeth, or did you just find yourself doing it?
- How long did you brush your teeth for?
- What were you thinking about when you brushed your teeth?



Habits

Learned sequence of acts that have been reinforced in the past by rewarding experiences and that are triggered by the environment to produce behaviour, largely outside conscious awareness

**Outside
Awareness**

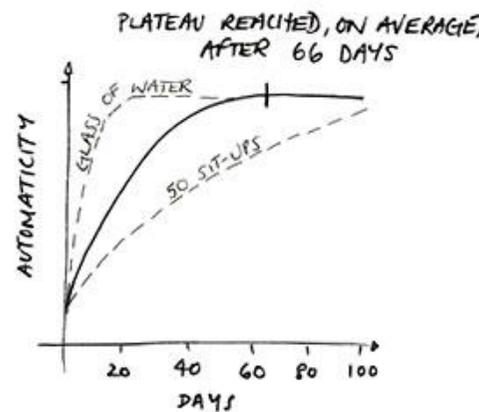
**Beyond
Control**

**Mentally
Efficient**

• How long does it take to form a habit?

Repetition of a behaviour in response to a cue leads to automatic performance.

Large variability between individuals in the time taken for behaviours to become 'habitual': 18 - 254 days.

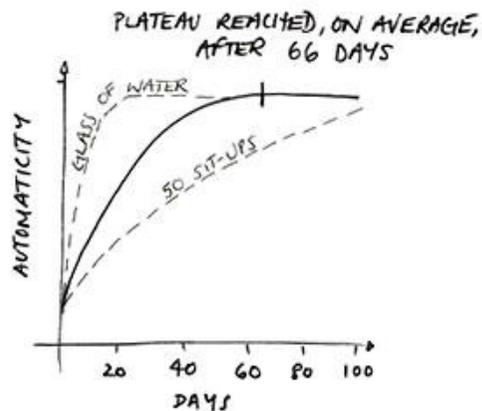


Complex behaviours more likely to take longer to become automatic.

Some behaviours never became fully automatic.

Lally et al (2009). European Journal of Social Psychology

• Forming habitual behaviours...



Link the desired behaviour to something that is already a well-established part of your routine.

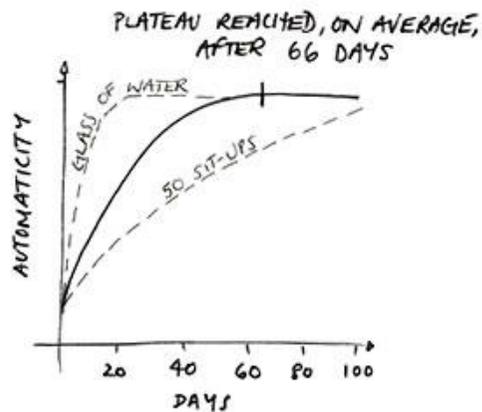
Define a specific SMART goal with an If-then rule

Commit to doing the behaviour as consistently as possible.

Plan to repeat the behaviour for at least two months, or until it feels 'automatic'.

Monitor, reinforce and re-evaluate the success.

• Changing habitual behaviours...



Habitual behaviours are unlikely to respond to educational approaches.

Disruption of established habits requires conscious self-directed effort: plans.

Recognise the cue and work out how to behave differently in its presence.

Plan to do a compelling alternative behaviour to compete with the established habit.

Monitor, reinforce and re-evaluate the success.

Influencing motivation

Identity

How can the desired behaviour change be linked to those aspects of an individual that they consider important?

People are more likely to do things if they are consistent with how they like to see themselves...
E.g. parents might give up smoking because they believe that being 'a good parent' is inconsistent with exposing their child to harm

Beliefs about change

How can we increase people's sense that they can make the desired change?

People are more likely to do things if they believe they can; e.g. Teaching their children to read

Habit

How can we use habit formation or disruption principles?

Can we make the behaviour habitual? Or break unwanted habits by making self-regulation plans to change? E.g. eating fruit after a meal as a 'dessert'.

Emotion

How can we modify emotional influences?

People do things that make them feel good and avoid things that make them feel bad. Can we make people feel good about the behaviour? E.g. joining a group programme in a sure start centre.

Please check with an X what needs to happen/change if someone wants to develop/ increase each behavior
 Read first the definitions after the table.

10 min

COM-B components*1	Competence- Ability					Opportunity			Motivation									
	Physical capability	Psychological capability				Physical opportunity	Social opportunity	Reflective motivation					Automatic motivation					
TDF Domains*2	Skills	Knowledge	Skills	Memory attention & Decision processes	Behavioral regulation	Environmental context	Resources	Social influences	Social role - identity	Beliefs about capabilities	Optimism	Beliefs about consequences	Intentions	Goals	Social role - identity	Optimism	Reinforcement	Emotion
Behaviour A.																		
Behaviour B.																		

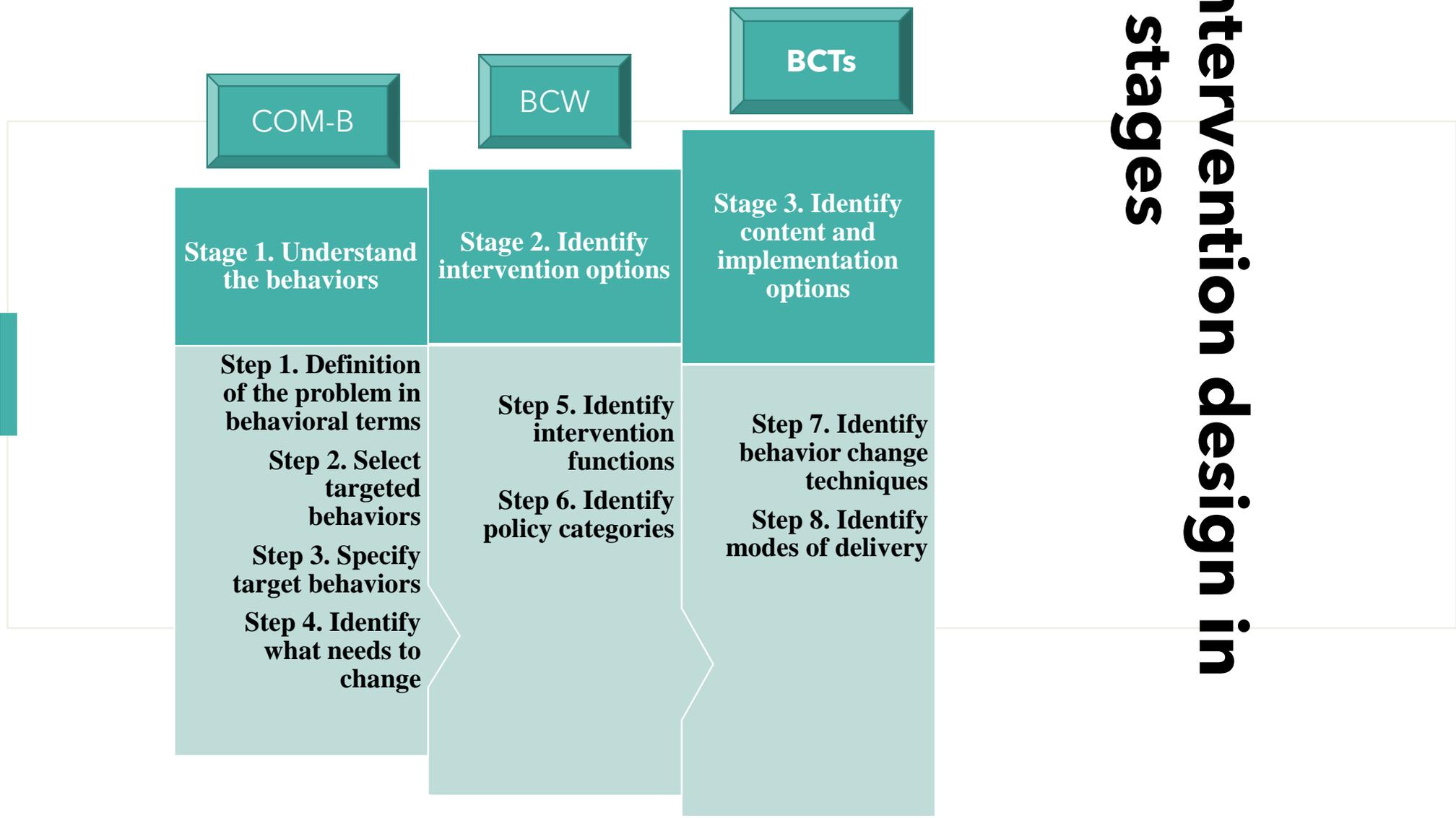
Form 4 COM-B (1)

	Capability	Opportunity	Motivation
	know more about why it is important		
	know more about how to do it		
	have better physical skills		
	have better mental skills		
	have more physical strength		
	have more mental strength		
	overcome physical limitations		
	overcome mental obstacles		
	have more physical stamina		
	have more mental stamina		
	have more time to do it		
	have more money		
	have the necessary materials		
	have it more easily accessible		
	have more people around you doing it		
	have more triggers to prompt you		
	have more support from others		
	feel that you want to do it enough		
	feel that you need to do it enough		
	believe that it would be a good thing to do		
	develop better plans for doing it		
	develop a habit of doing it		
Behaviour A.			
Behaviour B.			

10 min

Form 4 COM-B (2)

Intervention design in 3 stages



Step 5. Identify intervention functions





Your toolbox:

- Start by understanding the behaviour
 - Behavioural analysis and diagnosis using COM-B



- Systematically select appropriate intervention functions and policy categories to bring about change
 - Design the intervention ('prescribed treatment') using BCW based on the behavioural diagnosis



- [Specify active ingredients in the intervention
 - Using BCT Taxonomy]



Behavioural analysis

Psychological capability

- Parents didn't know what correct portion sizes were and had difficulty understanding food packaging portion guidelines

Reflective motivation

- Parents said they lacked confidence in their ability to provide correct portion sizes

Physical opportunity

- Parents said they didn't have time to read food and preferred using non-specific measuring tools (cups/spoons) instead of scales

Social opportunity

- Partners were not always supportive and continued to give too big portion sizes

From thinking about behaviour → intervention

❑ Use theory to inform development of your intervention

WHY?

- Those that use theory hypothesised to be more effective
- Provides a framework to facilitate
 - Accumulation of evidence
 - Communication across research groups + practitioners
- Helps identify barriers and facilitators to change
- Helps understand process of behaviour change
- Can be used to design and improve interventions

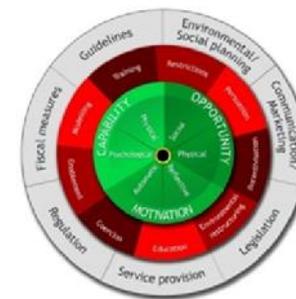
❑ Wide range of theories available. Which to use?

- Select most appropriate from review of theories [Davis et al. \(2014\)](#)
- Use a framework that **integrates a wide range** of theories

Do we have such a framework?

- Systematic literature review identified 19 frameworks of behaviour change interventions
 - related to health, environment, culture change, social marketing etc.
- None met all these three criteria
- So Developed a synthesis of the 19 frameworks

Michie et al (2011) The Behaviour Change Wheel: a new method for characterising and designing behaviour change interventions, *Implementation Science*

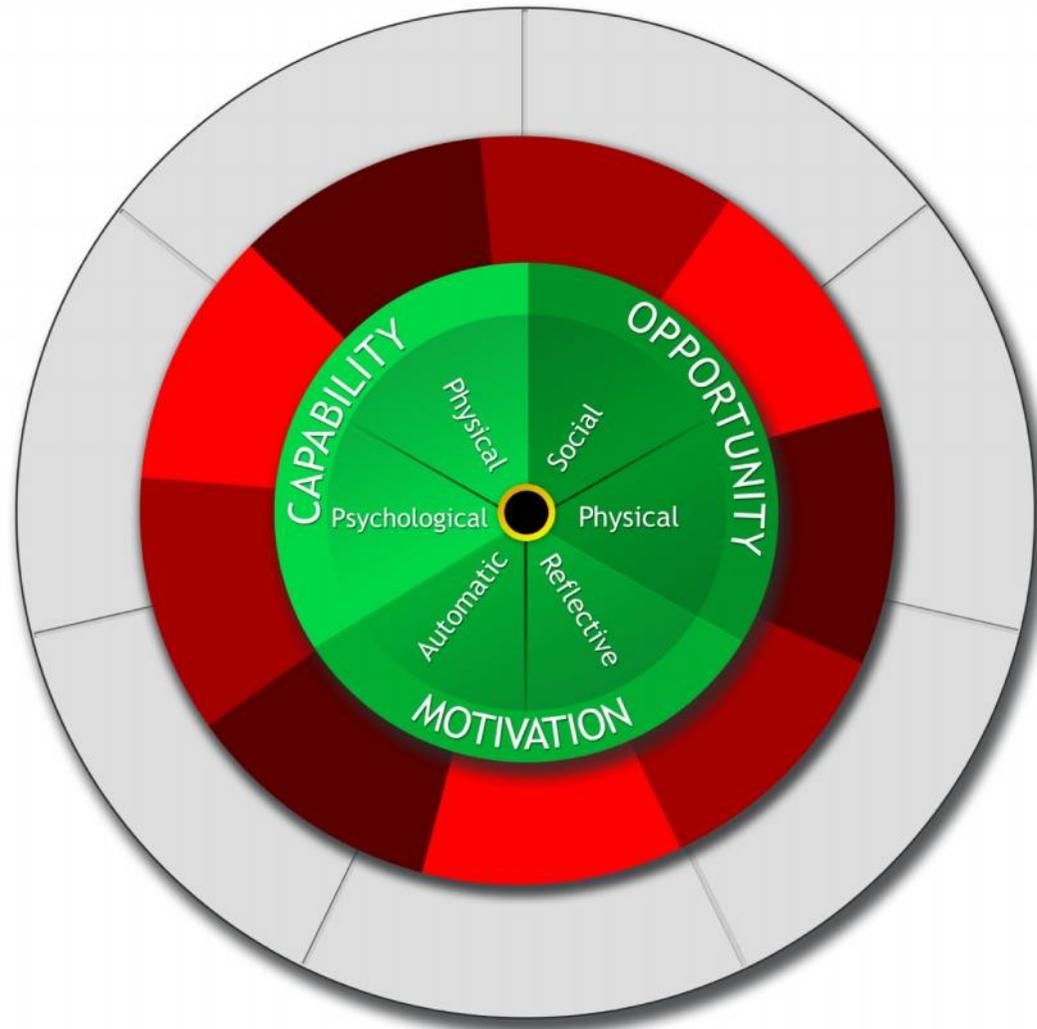
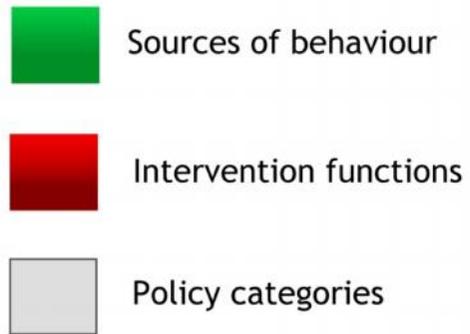


The Behaviour Change Wheel

- Synthesis identified 9 intervention functions and 7 policy categories
- Linked to a model of behaviour - COM-B
 - Forms the hub of the 'wheel'



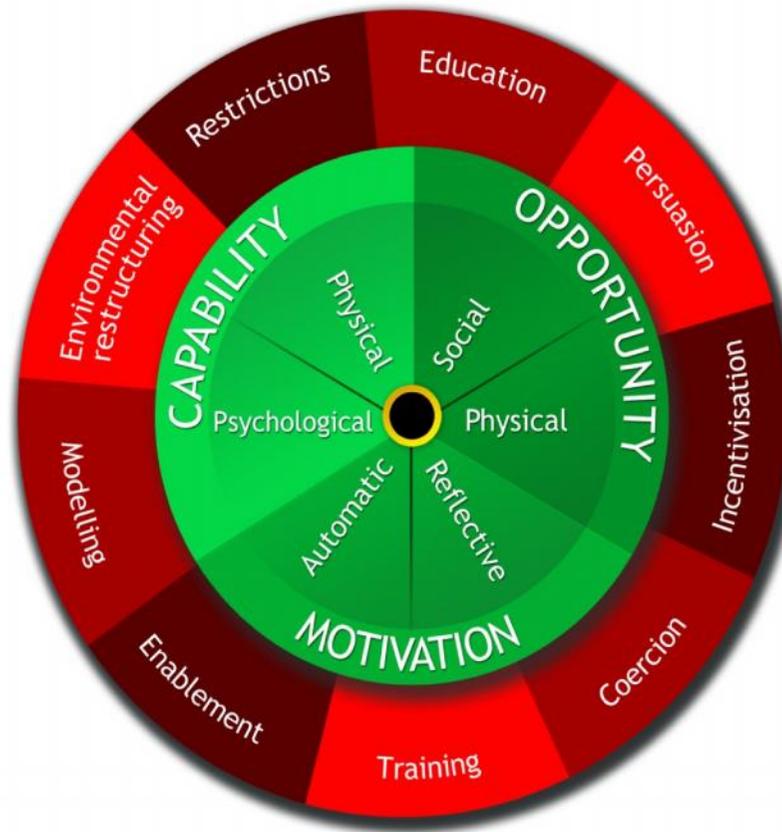
Behaviour at the hub COM-B



Interventions

- Sources of behaviour
- Intervention functions

Interventions:
activities
designed to
change
behaviours





Change the physical or social context

Provide an example for people to aspire to or emulate



Increase means or reduce barriers to increase capability (beyond education or training) or opportunity (beyond environmental restructuring)



Use rules to reduce the opportunity to engage in the behaviour



Increase knowledge or understanding

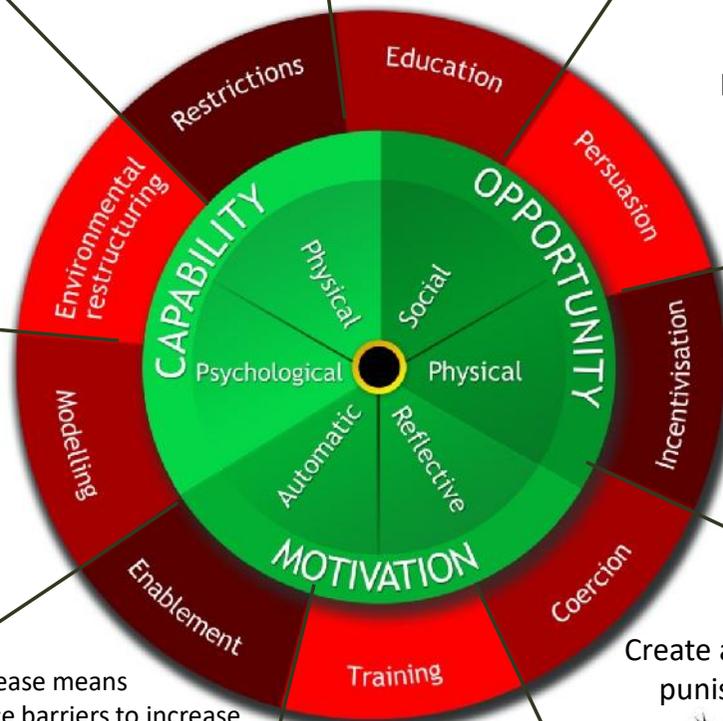


Use communication to induce positive or negative feelings to stimulate action

Create an expectation of reward

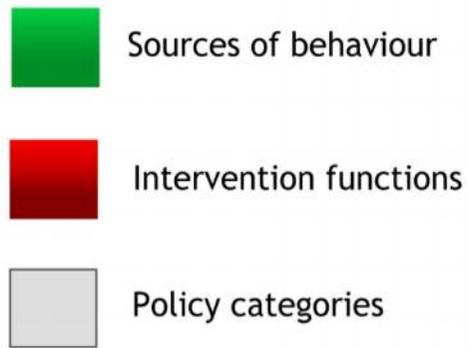


Create an expectation of punishment or cost

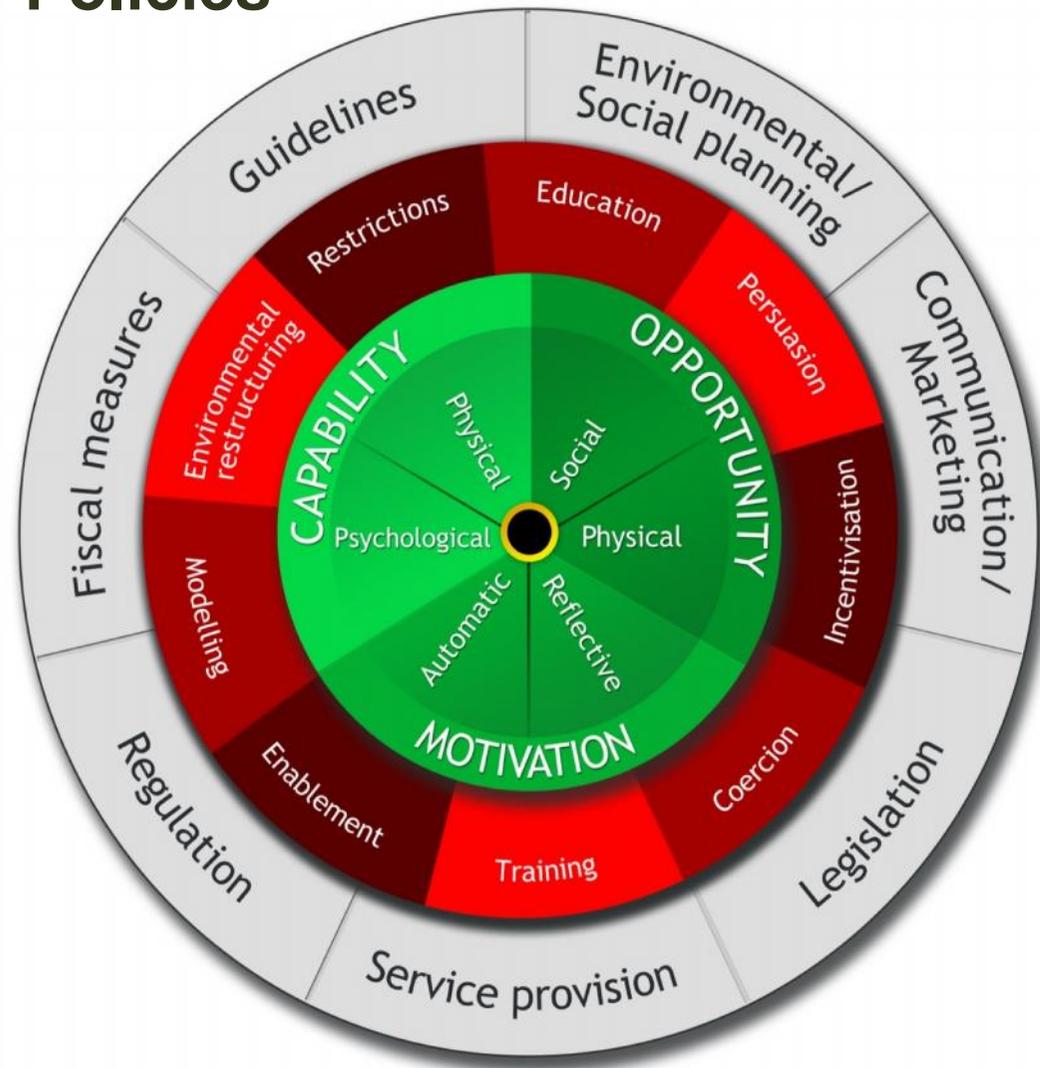


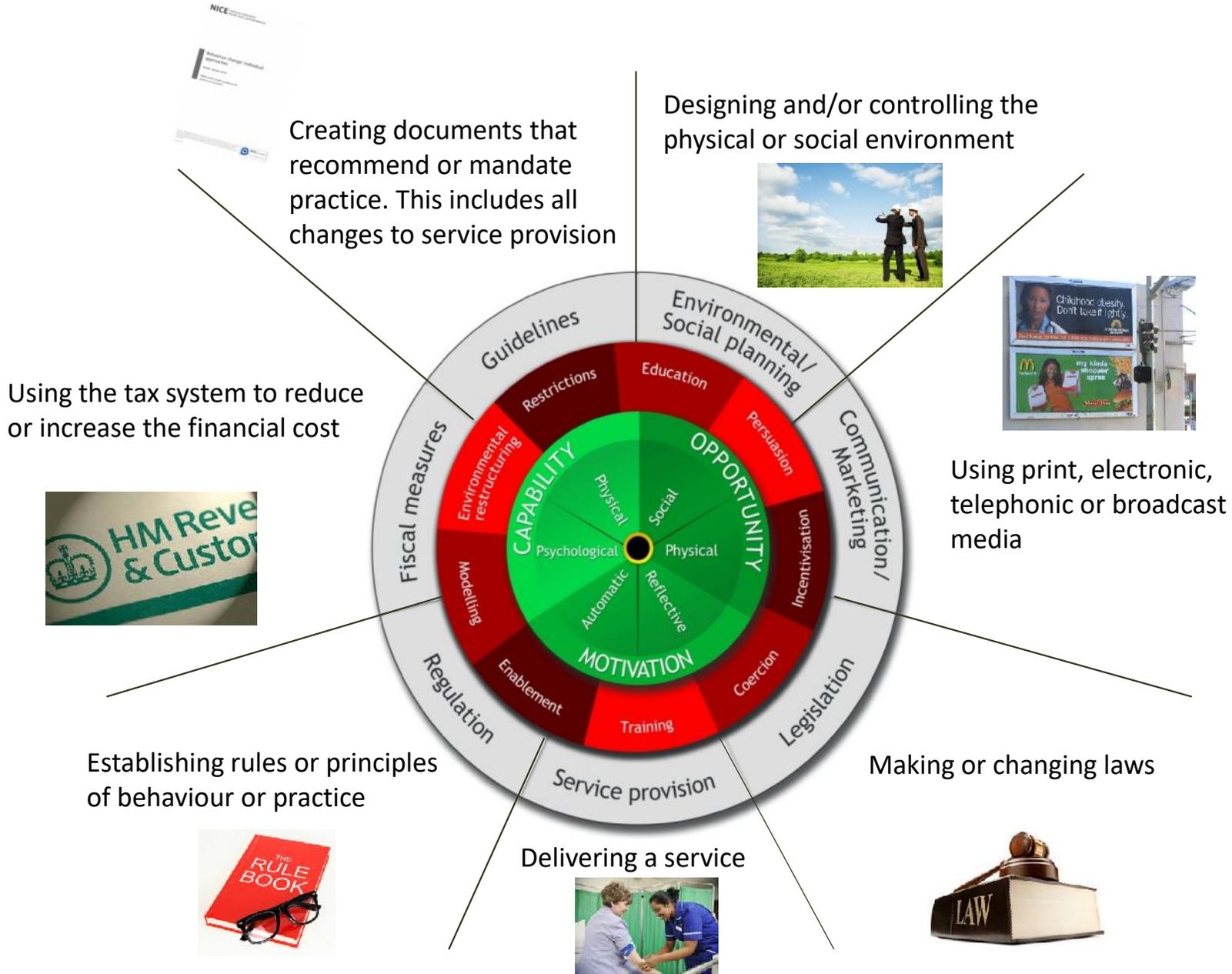
Impart skills

Policies



Policies:
 decisions made by authorities concerning interventions





Selecting relevant intervention functions



	Intervention functions								
	Education	Persuasion	Incentivisation	Coercion	Training	Restriction	Environmental restructuring	Modelling	Enablement
Physical capability					Yellow				Yellow
Psychological capability	Yellow				Yellow				Yellow
Physical opportunity					Blue	Yellow	Yellow		Yellow
Social opportunity						Yellow	Yellow	Blue	Yellow
Automatic motivation		Yellow	Yellow	Yellow	Blue		Yellow	Yellow	Yellow
Reflective motivation	Yellow	Yellow	Yellow	Yellow					

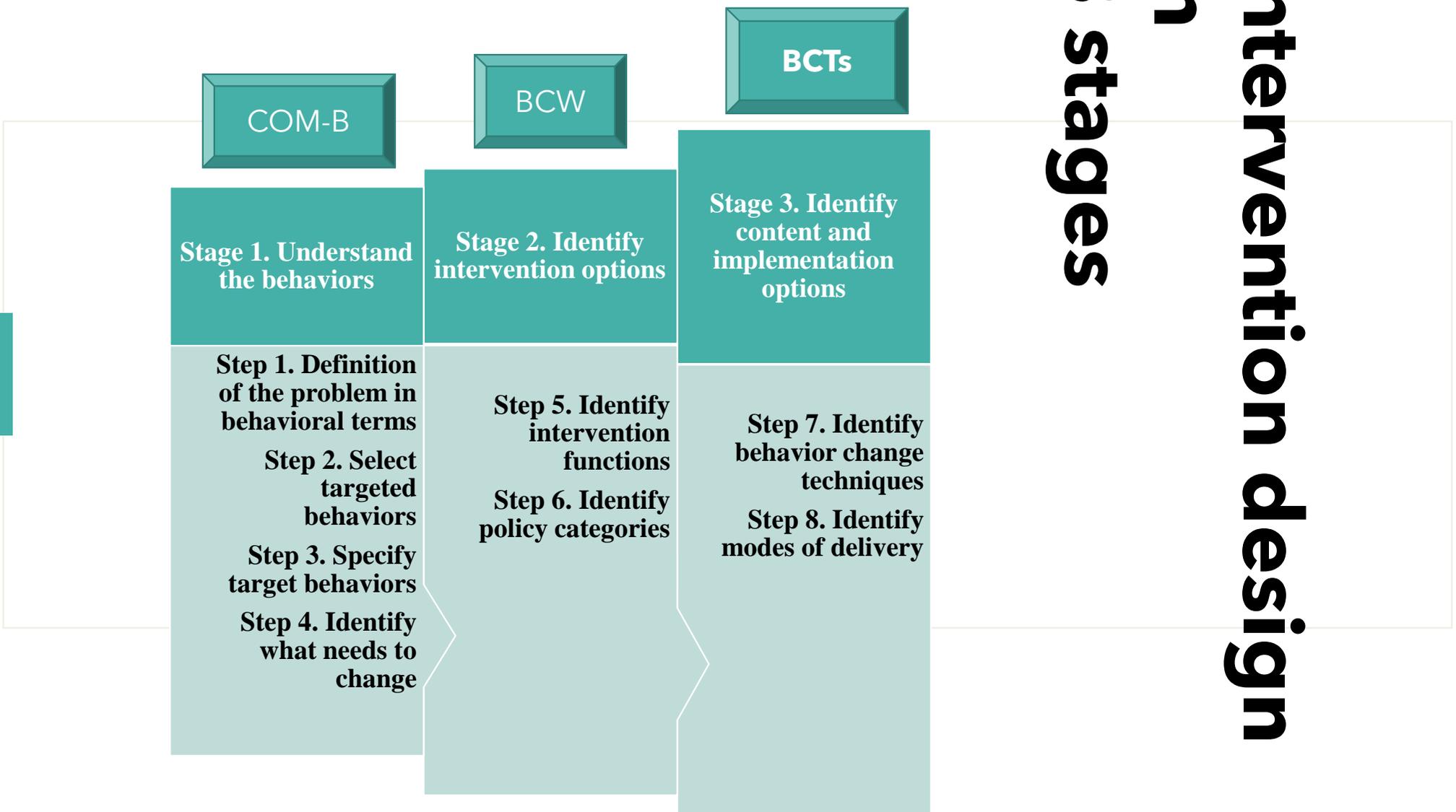
Step 6. Identify policy categories



Form 6. policies

	Education	Persuasion	Incentivisation	Training	Environmental restructuring	Enablement
Communication / Marketing						
Guidelines						
Fiscal						
Regulation						
Legislation						
Environmental / Social planning						
Service Provision						

Intervention design in 3 stages

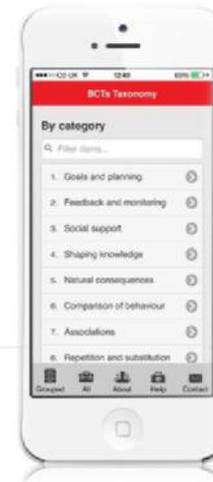


Step 7. Identify behavior change techniques



Download the BCT app now!

- Or.... Printed material



**THERE'S
AN
APP
FOR
THAT**

Meanwhile download the BCT app now!



BCT Taxonomy

David Crane PhD Education

3 PEGI 3

i This app is compatible with all of y

BCT Taxonomy (v1): 93 hierarchically-clustered techniques

Page	Grouping and BCTs	Page	Grouping and BCTs	Page	Grouping and BCTs
1	1. Goals and planning 1.1. Goal setting (behavior) 1.2. Problem solving 1.3. Goal setting (outcome) 1.4. Action planning 1.5. Review behavior goal(s) 1.6. Discrepancy between current behavior and goal 1.7. Review outcome goal(s) 1.8. Behavioral contract 1.9. Commitment	8	6. Comparison of behaviour 6.1. Demonstration of the behavior 6.2. Social comparison 6.3. Information about others' approval	16	12. Antecedents 12.1. Restructuring the physical environment 12.2. Restructuring the social environment 12.3. Avoidance/reducing exposure to cues for the behavior 12.4. Distraction 12.5. Adding objects to the environment 12.6. Body changes
3	2. Feedback and monitoring 2.1. Monitoring of behavior by others without feedback 2.2. Feedback on behaviour 2.3. Self-monitoring of behaviour 2.4. Self-monitoring of outcome(s) of behaviour 2.5. Monitoring of outcome(s) of behavior without feedback 2.6. Biofeedback 2.7. Feedback on outcome(s) of behavior	9	7. Associations 7.1. Prompts/cues 7.2. Cue signalling reward 7.3. Reduce prompts/cues 7.4. Remove access to the reward 7.5. Remove aversive stimulus 7.6. Satiation 7.7. Exposure 7.8. Associative learning	17	13. Identity 13.1. Identification of self as role model 13.2. Framing/reframing 13.3. Incompatible beliefs 13.4. Valued self-identify 13.5. Identity associated with changed behavior
5	3. Social support 3.1. Social support (unspecified) 3.2. Social support (practical) 3.3. Social support (emotional)	10	8. Repetition and substitution 8.1. Behavioral practice/rehearsal 8.2. Behavior substitution 8.3. Habit formation 8.4. Habit reversal 8.5. Overcorrection 8.6. Generalisation of target behavior 8.7. Graded tasks	18	14. Scheduled consequences 14.1. Behavior cost 14.2. Punishment 14.3. Remove reward 14.4. Reward approximation 14.5. Rewarding completion 14.6. Situation-specific reward 14.7. Reward incompatible behavior 14.8. Reward alternative behavior 14.9. Reduce reward frequency 14.10. Remove punishment
6	4. Shaping knowledge 4.1. Instruction on how to perform the behavior 4.2. Information about Antecedents 4.3. Re-attribution 4.4. Behavioral experiments	11	9. Comparison of outcomes 9.1. Credible source 9.2. Pros and cons 9.3. Comparative imagining of future outcomes	19	15. Self-belief 15.1. Verbal persuasion about capability 15.2. Mental rehearsal of successful performance 15.3. Focus on past success 15.4. Self-talk
7	5. Natural consequences 5.1. Information about health consequences 5.2. Salience of consequences 5.3. Information about social and environmental consequences 5.4. Monitoring of emotional consequences 5.5. Anticipated regret 5.6. Information about emotional consequences	12	10. Reward and threat 10.1. Material incentive (behavior) 10.2. Material reward (behavior) 10.3. Non-specific reward 10.4. Social reward 10.5. Social incentive 10.6. Non-specific incentive 10.7. Self-incentive 10.8. Incentive (outcome) 10.9. Self-reward 10.10. Reward (outcome) 10.11. Future punishment	19	16. Covert learning 16.1. Imaginary punishment 16.2. Imaginary reward 16.3. Vicarious consequences
		15	11. Regulation 11.1. Pharmacological support 11.2. Reduce negative emotions 11.3. Conserving mental resources 11.4. Paradoxical instructions		

BCTs v1 . pdf

No.	Label	Definition	Examples
1. Goals and planning			
1.1	Goal setting (behavior)	<p>Set or agree on a goal defined in terms of the behavior to be achieved</p> <p><i>Note: only code goal-setting if there is sufficient evidence that goal set as part of intervention; if goal unspecified or a behavioral outcome, code 1.3, Goal setting (outcome); if the goal defines a specific context, frequency, duration or intensity for the behavior, <u>also</u> code 1.4, Action planning</i></p>	<p>Agree on a daily walking goal (e.g. 3 miles) with the person and reach agreement about the goal</p> <p>Set the goal of eating 5 pieces of fruit per day as specified in public health guidelines</p>
1.2	Problem solving	<p>Analyse , or prompt the person to analyse, factors influencing the behavior and generate or select strategies that include overcoming barriers and/or increasing facilitators (includes 'Relapse Prevention' and 'Coping Planning')</p> <p><i>Note: barrier identification without solutions is not sufficient. If the BCT does not include analysing the behavioral problem, consider 12.3, Avoidance/changing exposure to cues for the behavior, 12.1, Restructuring the physical environment, 12.2, Restructuring the social environment, or 11.2, Reduce negative emotions</i></p>	<p>Identify specific triggers (e.g. being in a pub, feeling anxious) that generate the urge/want/need to drink and develop strategies for avoiding environmental triggers or for managing negative emotions, such as anxiety, that motivate drinking</p> <p>Prompt the patient to identify barriers preventing them from starting a new exercise regime e.g., lack of motivation, and discuss ways in which they could help overcome them e.g., going to the gym with a buddy</p>

1.3	Goal setting (outcome)	Set or agree on a goal defined in terms of a positive outcome of wanted behavior <i>Note: only code guidelines if set as a goal in an intervention context; if goal is a behavior, code 1.1, Goal setting (behavior); if goal unspecified code 1.3, Goal setting (outcome)</i>	Set a weight loss goal (e.g. 0.5 kilogram over one week) as an outcome of changed eating patterns
1.4	Action planning	Prompt detailed planning of performance of the behavior (must include at least one of context, frequency, duration and intensity). Context may be environmental (physical or social) or internal (physical, emotional or cognitive) (includes Implementation Intentions) <i>Note: evidence of action planning does not necessarily imply goal setting, only code latter if sufficient evidence</i>	Encourage a plan to carry condoms when going out socially at weekends Prompt planning the performance of a particular physical activity (e.g. running) at a particular time (e.g. before work) on certain days of the week
1.5	Review behavior goal(s)	Review behavior goal(s) jointly with the person and consider modifying goal(s) or behavior change strategy in light of achievement. This may lead to re-setting the same goal, a small change in that goal or setting a new goal instead of (or in addition to) the first, or no change <i>Note: if goal specified in terms of behavior, code 1.5, Review behavior goal(s), if goal unspecified, code 1.7, Review outcome goal(s); if discrepancy created consider also 1.6, Discrepancy between current behavior and goal</i>	Examine how well a person's performance corresponds to agreed goals e.g. whether they consumed less than one unit of alcohol per day, and consider modifying future behavioral goals accordingly e.g. by increasing or decreasing alcohol target or changing type of alcohol consumed

2.3	<i>Self-monitoring of behavior</i>	Establish a method for the person to monitor and record their behavior(s) as part of a behavior change strategy <i>Note: if monitoring is part of a data collection procedure rather than a strategy aimed at changing behavior, do not code; if monitoring of outcome of behavior, code 2.4, Self-monitoring of outcome(s) of behavior; if monitoring is by someone else (without feedback), code 2.1, Monitoring of behavior by others without feedback</i>	Ask the person to record daily, in a diary, whether they have brushed their teeth for at least two minutes before going to bed Give patient a pedometer and a form for recording daily total number of steps
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3.1 | ***Social support (unspecified)***

Advise on, arrange or provide social support (*e.g. from friends, relatives, colleagues, 'buddies' or staff*) or non-contingent praise or reward for performance of the behavior. It includes encouragement and counselling, but only when it is directed at the **behavior**
*Note: attending a group class and/or mention of 'follow-up' does not necessarily apply this BCT, support must be explicitly mentioned; if practical, code **3.2, Social support (practical)**; if emotional, code **3.3, Social support (emotional)** (includes **'Motivational interviewing'** and **'Cognitive Behavioral Therapy'**)*

Advise the person to call a 'buddy' when they experience an urge to smoke

Arrange for a housemate to encourage continuation with the behavior change programme

Give information about a self-help group that offers support for the behaviour

4.1

Instruction on how to perform a behavior

Advise or agree on how to perform the behavior (includes 'Skills training')
*Note: when the person attends classes such as exercise or cookery, code **4.1, Instruction on how to perform the behavior, 8.1, Behavioral practice/rehearsal and 6.1, Demonstration of the behavior***

Advise the person how to put a condom on a model of a penis correctly

6.1	<i>Demonstration of the behavior</i>	Provide an observable sample of the performance of the behaviour, directly in person or indirectly e.g. via film, pictures, for the person to aspire to or imitate (includes ' Modelling '). <i>Note: if advised to practice, <u>also</u> code, 8.1, Behavioural practice and rehearsal; If provided with instructions on how to perform, <u>also</u> code 4.1, Instruction on how to perform the behaviour</i>	Demonstrate to nurses how to raise the issue of excessive drinking with patients via a role-play exercise
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			Delivery modes			
Group	Behavior Change Techniques	Intervention Functions	Individual level		Population level	
			Face-to-face Counselling	Phone counselling	Printed Information Booklet	Printed Newsletter
Goals and planning	Goal setting (behavior)	Enablement	X		X	
	Problem solving	Enablement	X	X	X	
	Action planning	Enablement	X	X	X	
	Review behavior goals	Enablement		X		
	Discrepancy between current behavior and goal	Enablement		X		
Feedback and monitoring	Self-monitoring of behavior	Enablement Education Incentivisation	X	X	X	
Social support	Social support (unspecified)	Enablement	X	X		
	Social support (practical)	Enablement	X	X	X	X
	Social support (emotional)	Enablement	X	X	X	
Identity	Incompatible beliefs	Enablement	X			

Example

GROUP A:

- The **self-administered implementation intention group** received an implementation intention intervention that they were instructed to complete on their own.
- The activity began by discussing the S.M.A.R.T. (i.e., specific, measurable, attainable, realistic, and timely) goal setting principles [25].
- Before survivors set a new physical activity goal, they were instructed to write down their current levels of physical activity (e.g., duration, intensity, and frequency).
- The activity encouraged them to set goals in order to meet the physical activity guidelines if they were not currently meeting them, or to increase their physical activity by at least 60 min/week if they were already meeting the guidelines.
- Then, survivors were encouraged to make a detailed plan on how to achieve their goal (i.e., where and when they are going to be active, how they are going to be active, and with whom they are planning to be active).
- Survivors were then encouraged to list three personal physical activity barriers, as well as strategies to overcome them.
- Finally, the activity ended with a summary sheet, where survivors recorded their goal, detailed plan, barriers, and strategies so it could be placed in a visible location (e.g., fridge or nightstand).
- To aid in the completion of the activity, three examples were provided for each component of the implementation intention (e.g., where, when, with whom, etc.).

GROUP B:

- The **telephone-assisted implementation intention group** received the same implementation intention intervention as the self-administered implementation intention group plus a telephone call to assist with goal setting and planning.
- Survivors were encouraged to complete the implementation intention intervention before receiving their telephone counseling, however, if the activity was not completed prior to the telephone call, it was either completed on the phone or the call was rescheduled to give the survivor a chance to complete the activity.
- The purpose of the telephone counseling was to increase the likelihood of the survivor completing the activity and to improve the quality of the completed activity (i.e., SMART^{er} goals and more detailed plans).
- The counsellor's role was not to tell participants what they should be doing, but help participants develop a realistic plan of action to reach their physical activity goal that best suits their needs and abilities.
- Whenever deemed necessary, areas that could be improved were discussed with the survivor and they were encouraged to: [1] modify/ adjust their physical activity goal; [2] develop a more detailed plan; and/or [3] identify more potential physical activity barriers and strategies to overcome their barriers. For example, if a participant only stated that they were planning on being active 3 days per week, they would be encouraged to choose specific days and times that would work for their activity.

Step 8. Identify modes of delivery



Mediated interventions

- Interventions that are delivered through means other than face-to-face media, such as *print*, *telephone*, or the *Internet*, have been referred to as **mediated interventions**.
- They offer the potential for greater participant adherence, because participants are often able to engage in the intervention at their own convenience.

Print and Web-based Media

Print media can promote PA in:

- Booklets
- Brochures & handouts

It is available from:

- Recreational centres
- Regional Sports Assemblies
- Health care centres
- School and workplaces
- Mail outs

Mass media campaigns

- TV
- Radio

Web based media promotes PA through:

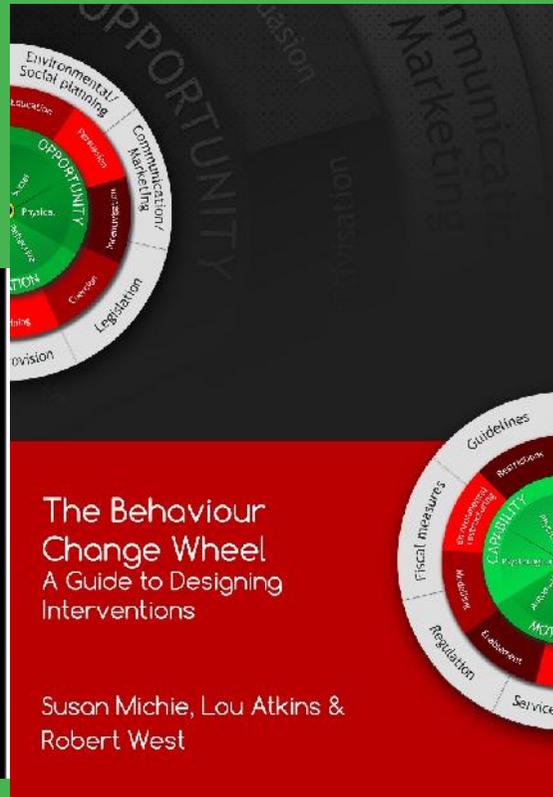
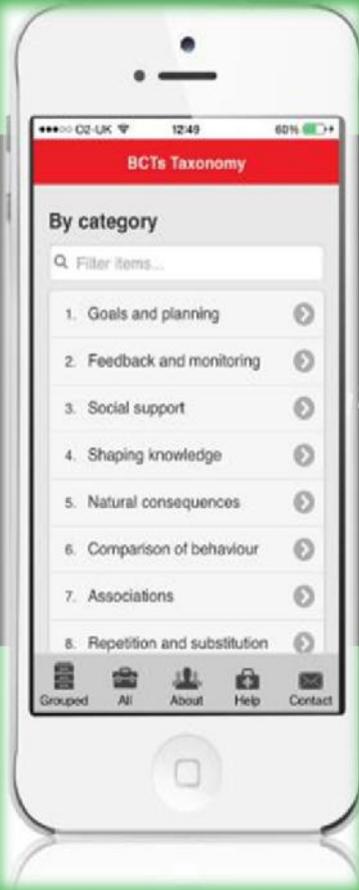
- Interactive websites
- Great short term value - not long term

COM-B Behavioural diagnosis		BCW	BCT Taxonomy
COM-B	S/He needs to..	Intervention functions	BCTs (delivery mode)
Physical capability			
Psychological capability			
Physical Opportunity			
Social opportunity			
Reflective motivation			
Automatic motivation			

Print out



www.behaviourchangewheel.com



BCT Taxonomy Online Training

Developed by Susan Michie and Caroline Wood

Applying the Behaviour Change Technique Taxonomy v1 (BCTTv1)

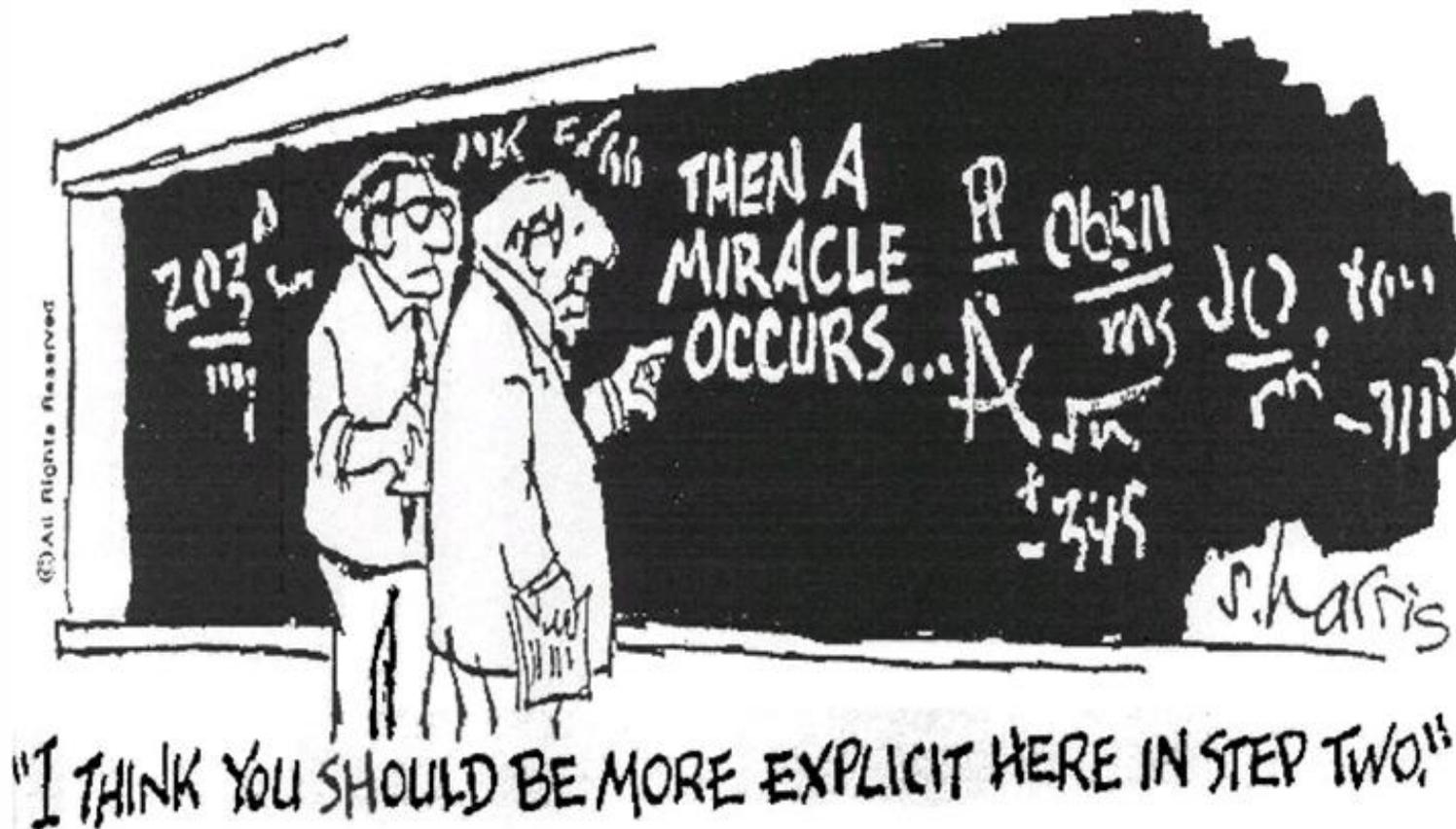
A close-up photograph of a hand clicking a computer mouse.

www.bct-taxonomy.com



Intervention description

Intervention description: The key for the black box of "what happened"



Why intervention description matters...

- Without complete published description of interventions, readers cannot reliably implement interventions that are shown to be useful, and other researchers cannot replicate or build on research findings.
- The quality of description of interventions in publications, however, is remarkably poor.
- To improve the completeness of reporting, and ultimately the replicability, of interventions, an international group of experts and stakeholders developed the Template for Intervention Description and Replication (TIDieR) checklist and guide.

	WHY	
2.	Describe any rationale, theory, or goal of the elements essential to the intervention.	_____
	WHAT	
3.	Materials: Describe any physical or informational materials used in the intervention, including those provided to participants or used in intervention delivery or in training of intervention providers. Provide information on where the materials can be accessed (e.g. online appendix, URL).	_____
4.	Procedures: Describe each of the procedures, activities, and/or processes used in the intervention, including any enabling or support activities.	_____
	WHO PROVIDED	
5.	For each category of intervention provider (e.g. psychologist, nursing assistant), describe their expertise, background and any specific training given.	_____
	HOW	
6.	Describe the modes of delivery (e.g. face-to-face or by some other mechanism, such as internet or telephone) of the intervention and whether it was provided individually or in a group.	_____
	WHERE	
7.	Describe the type(s) of location(s) where the intervention occurred, including any necessary infrastructure or relevant features.	_____

For more visit...

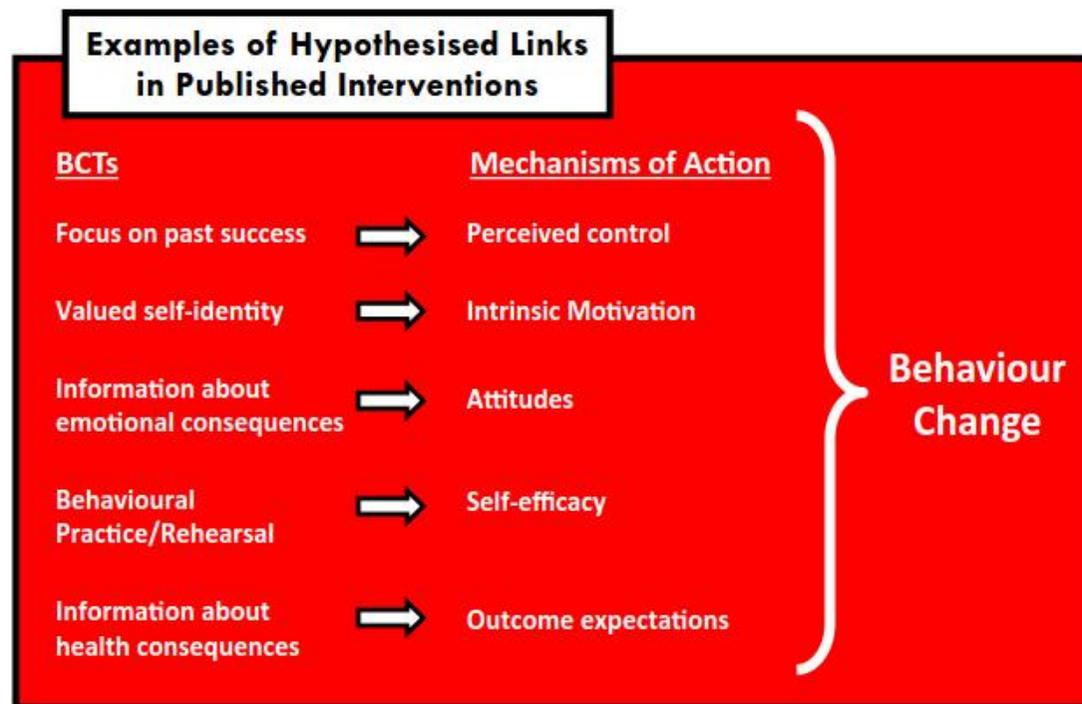
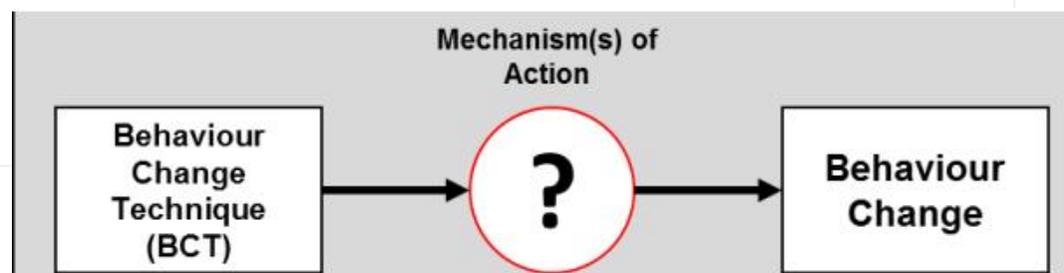
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- **New tools**

- <https://www.humanbehaviourchange.org/news/two-new-online-tools-for-investigating-behaviour-change-the-theory-techniques-tool-and-the-behaviour-change-technique-study-repository/23>

- **1) The Theory & Technique Tool**

- **2) The Behaviour Change Technique Study Repository: a resource and tool to upload papers coded using Behaviour Change Techniques Taxonomy v1 (BCTTv1)**





Finally, over...
Thank you