



## Systematic Behaviour Change using the RANAS approach: handwashing campaign in rural and urban Zimbabwe

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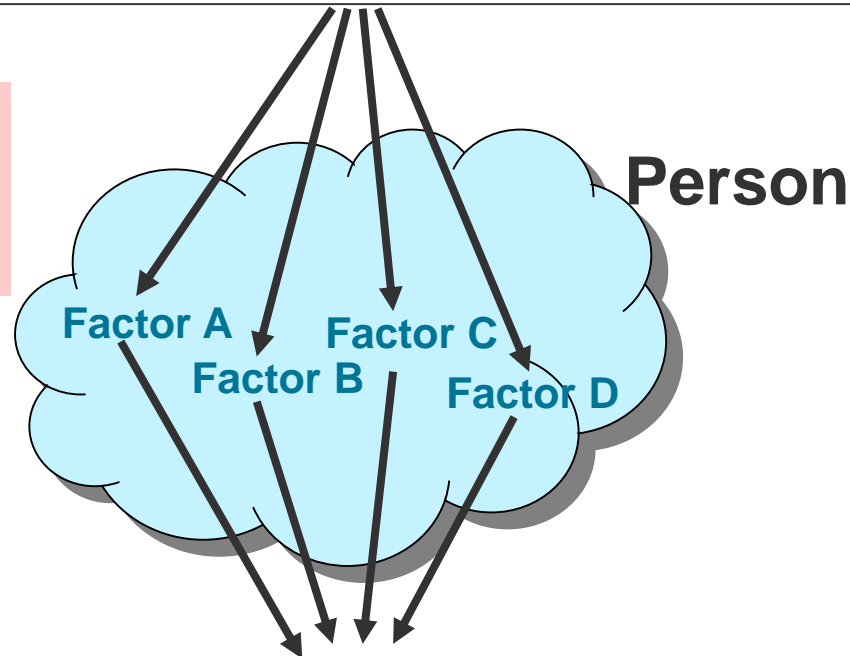
Environmental Social Sciences  
Environmental & Health Psychology

Eawag: Swiss Federal Institute of Aquatic Science and Technology

# *How to introduce behavior change?*

**Promotion of behavior**

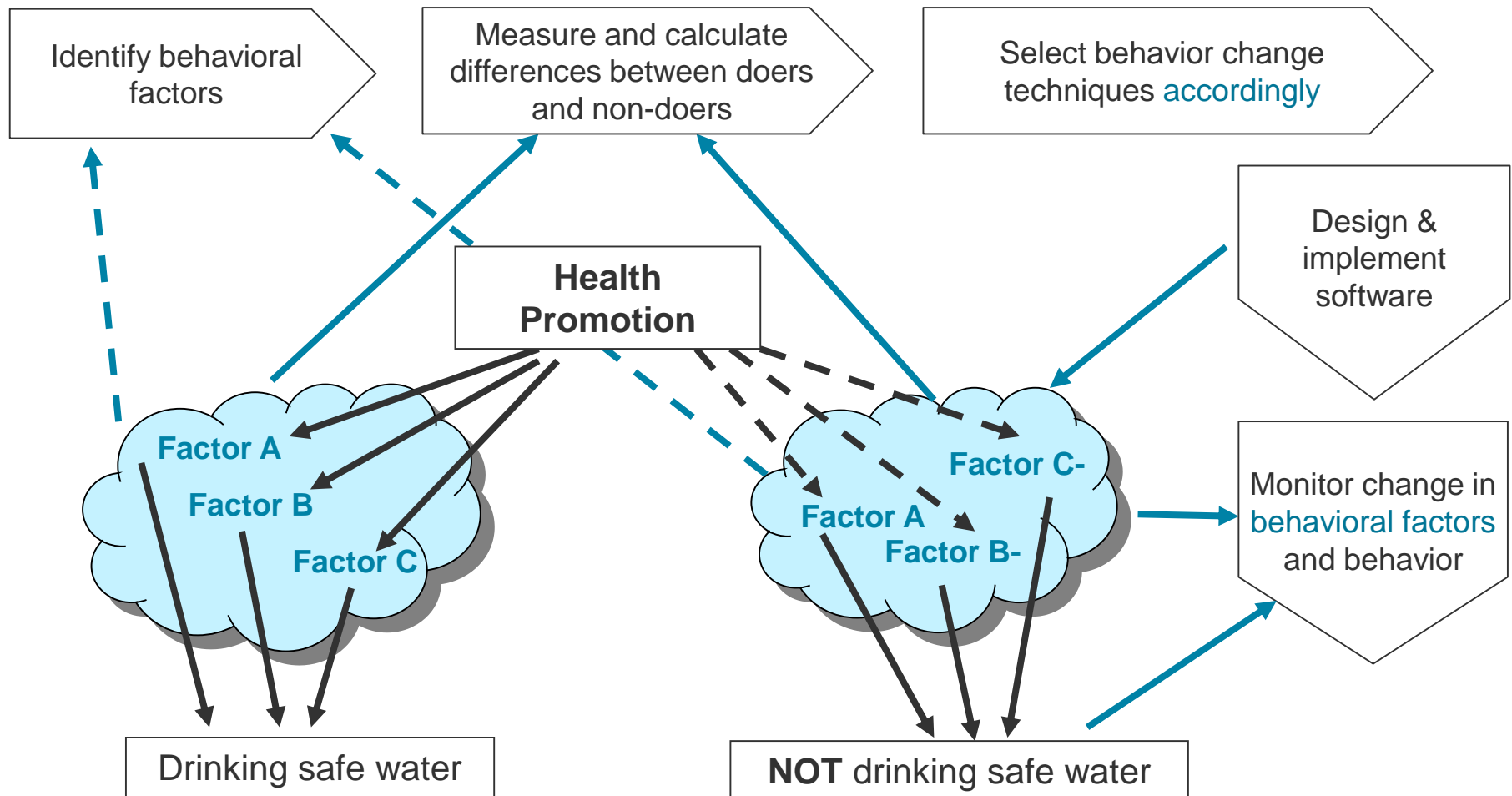
**Behaviour change starts in the head of the people!**



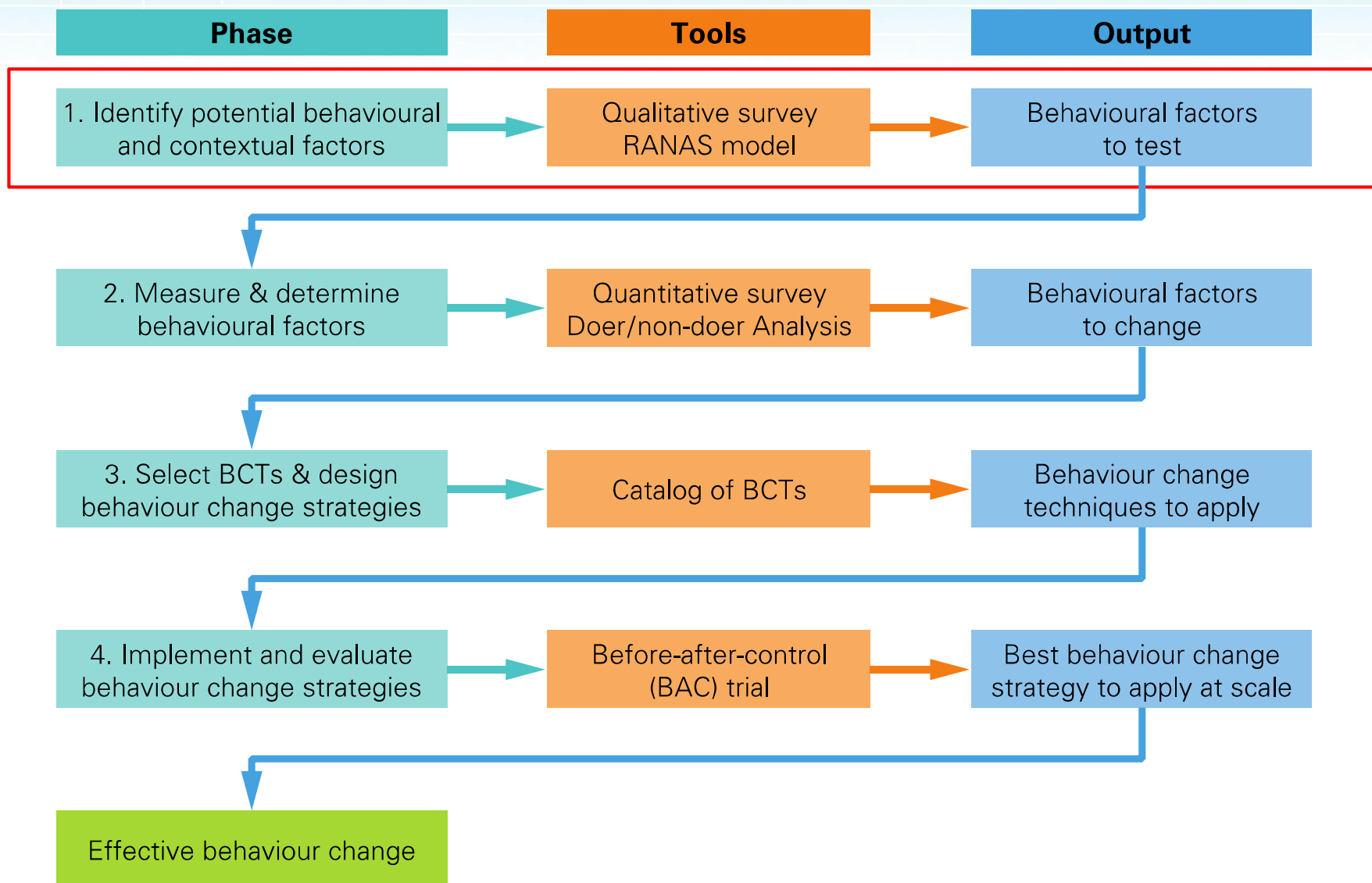
**Behavioral factors**

**Behavior change**

# How to introduce behavior change?



# The RANAS Systematic Behavior Change Approach







How to  
manage  
it?

Can I  
do it?

What will  
others  
say?

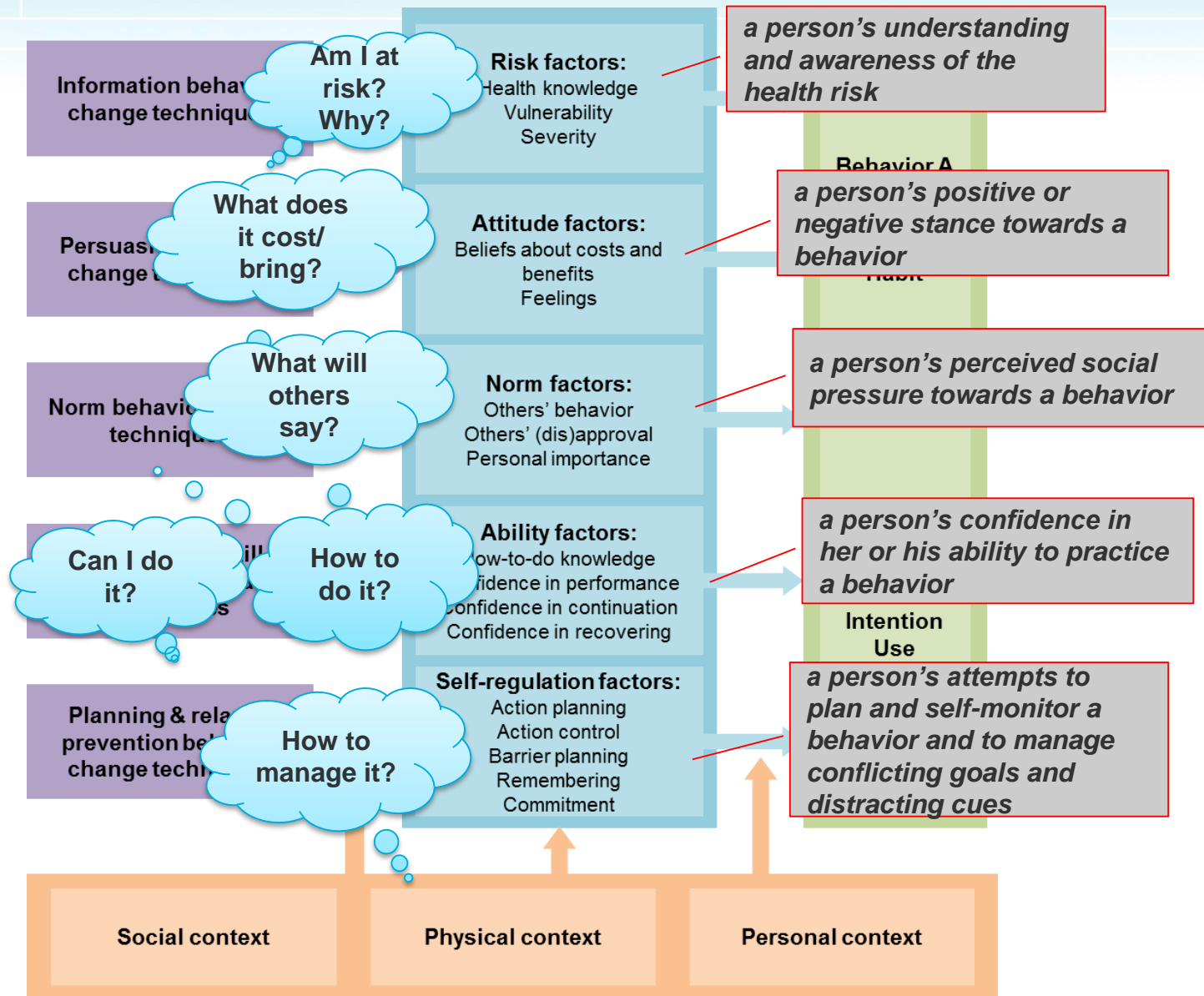
Do I like  
it?

What does  
it cost/  
bring?

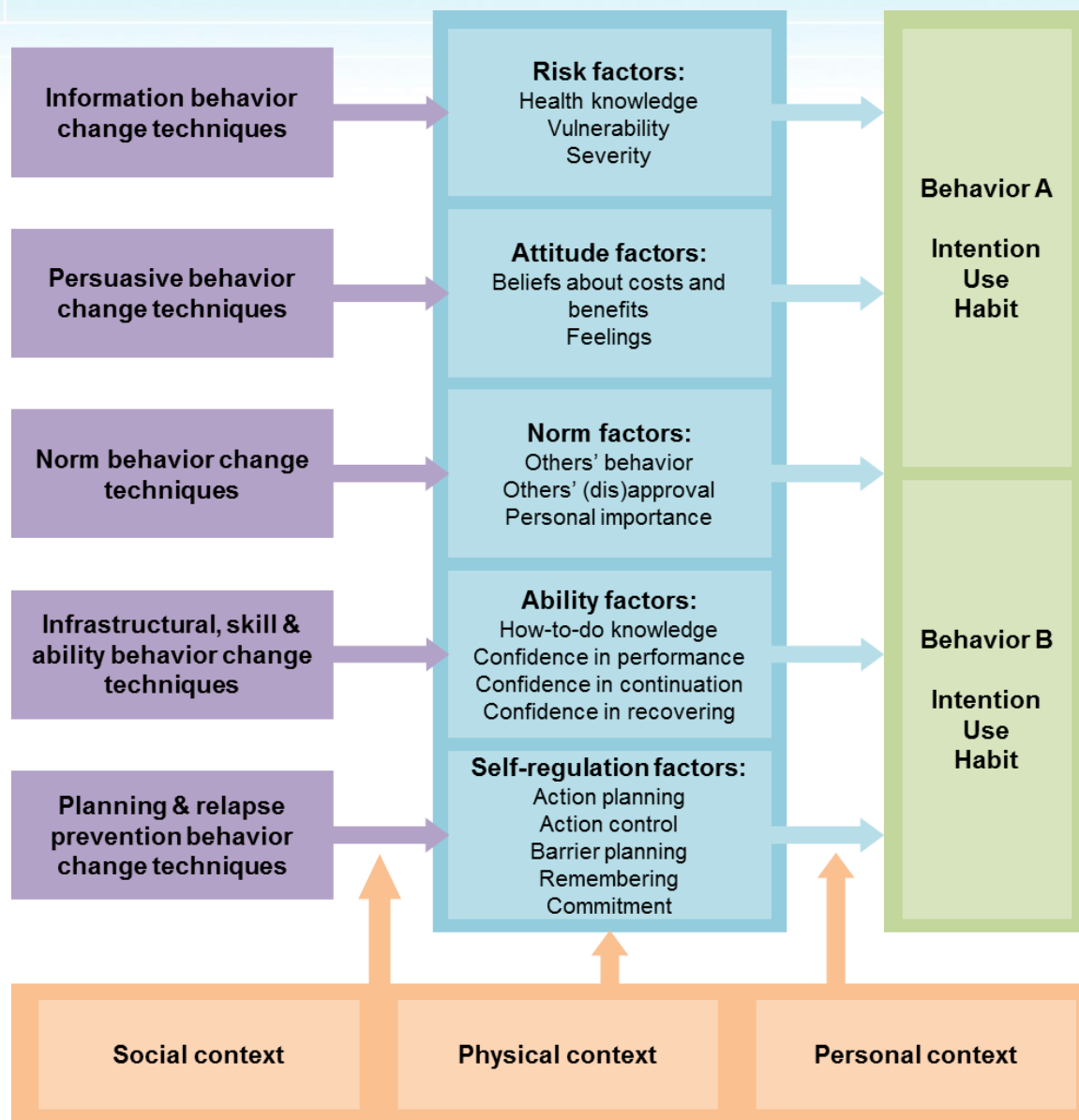
Am I at  
risk?  
Why?

How to  
do it?

# The RANAS-Model: Risk, Attitudes, Norms, Ability and Self-regulation



# The RANAS Model: Risks, Attitudes, Norms, Abilities, and Self-regulation





# Case Study: Design, Implementation and Evaluation of a Handwashing Campaign in Zimbabwe

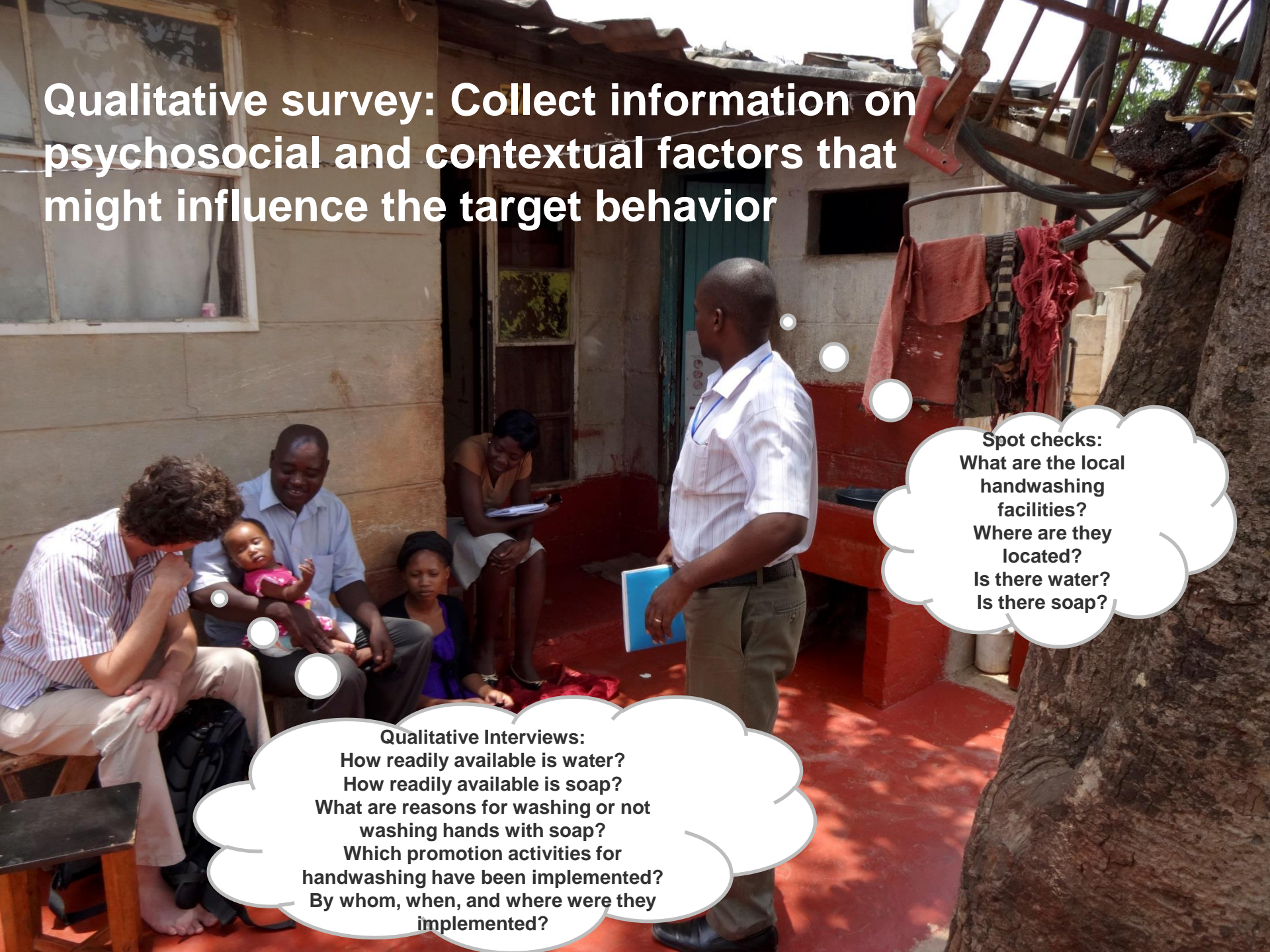
Urban: Harare

Rural: Masvingo Province





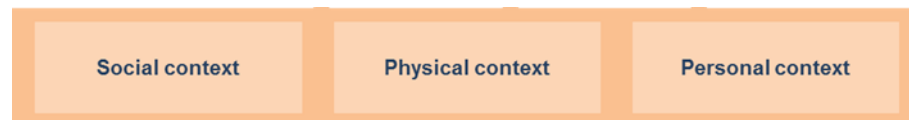
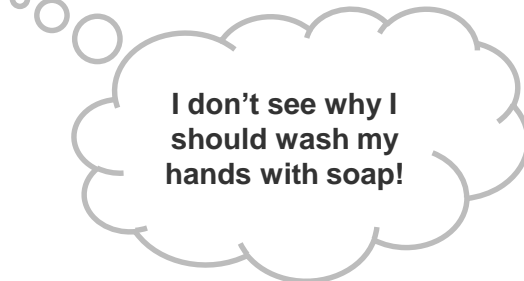
# Qualitative survey: Collect information on psychosocial and contextual factors that might influence the target behavior



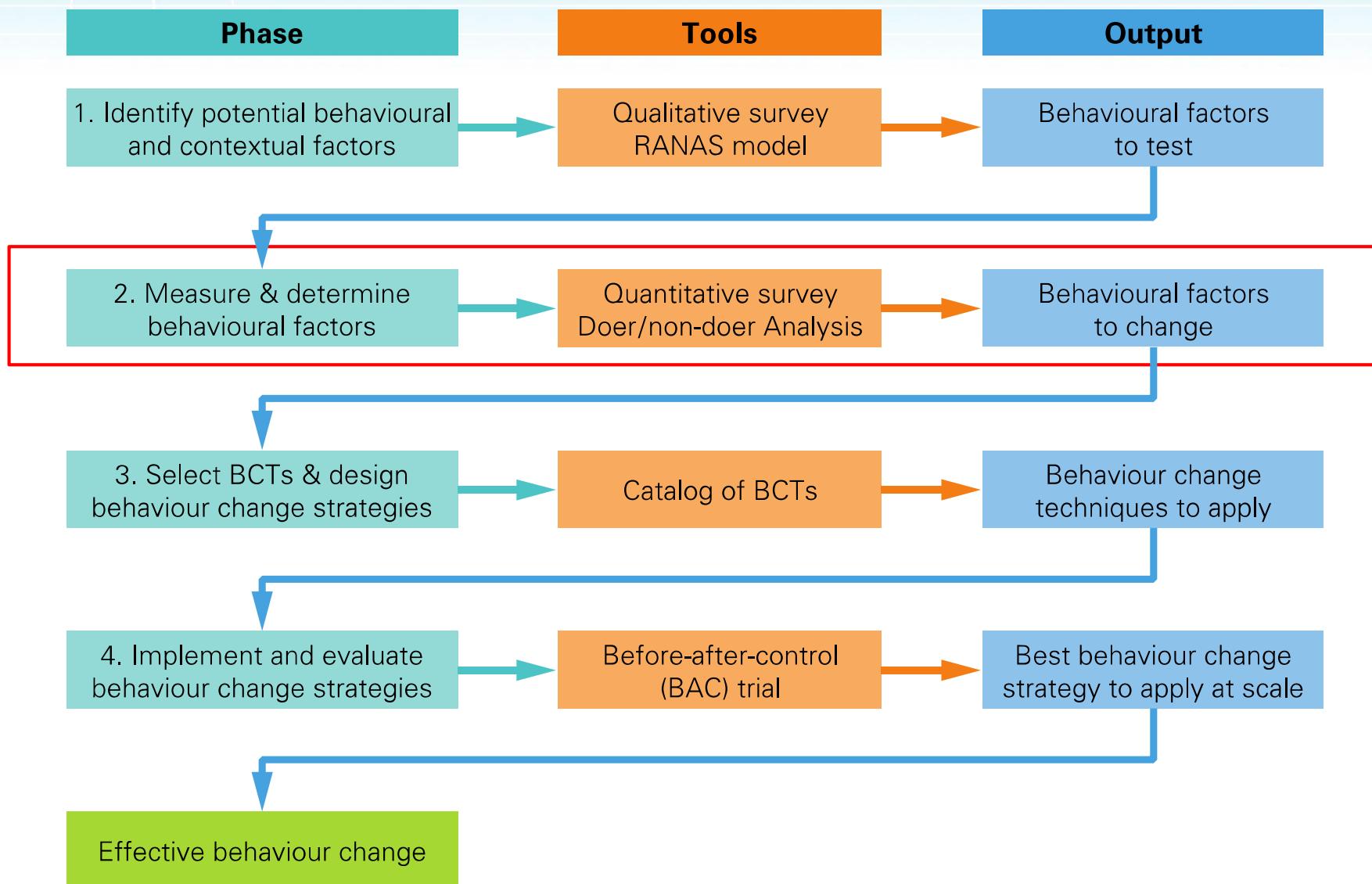
**Spot checks:**  
What are the local handwashing facilities?  
Where are they located?  
Is there water?  
Is there soap?

**Qualitative Interviews:**  
How readily available is water?  
How readily available is soap?  
What are reasons for washing or not washing hands with soap?  
Which promotion activities for handwashing have been implemented?  
By whom, when, and where were they implemented?

# Allocate psychosocial and contextual factors to the RANAS model



# The RANAS Systematic Behavior Change Approach





# Quantitative survey: Standardized questionnaire

Block	Factor	Exemplary questionnaire item (with response scale)
Behavior	Self-reported handwashing	In the following situations, how often do you wash your hands with soap and water? Please tell us in how many out of 10 times you wash your hands with soap and water ... <i>Before eating? Before preparing/cutting food? .....</i>
Risk	Vulnerability	If you always wash your hands with soap and water before handling food, how high do you feel is the risk that you contract diarrhea? (1 = <i>no risk</i> to 5 = <i>high risk</i> )
	Severity	Imagine that you contracted diarrhea how severe would be the impact on your life in general? (1 = <i>not severe</i> to 5 = <i>very severe</i> )
	Health Knowledge	Can you tell me what causes diarrhoea? (open ended question)
Attitude	Beliefs about costs and benefits	How effortful do you think is always washing hands with soap and water before handling food? (1 = <i>not at all</i> to 5 = <i>very much</i> )
	Feelings	How disgusting do you think is it not to always wash hands with soap and water before handling food? (1 = <i>not at all</i> to 5 = <i>very much</i> )
Norm	Others' behavior	How many people in your household always wash hands with soap and water after contact with stool? (1=Almost) nobody to 5=(Almost) all of them)
	Others' (dis)approval	People who are important to you, how much do they think you should always wash your hands with soap and water? (1=not at all to 5=very much)

# Doer/non-doer analysis

Doer

1. Classification  
based on behavior

2. Comparison of  
doers and non-doers

Non-  
Doer

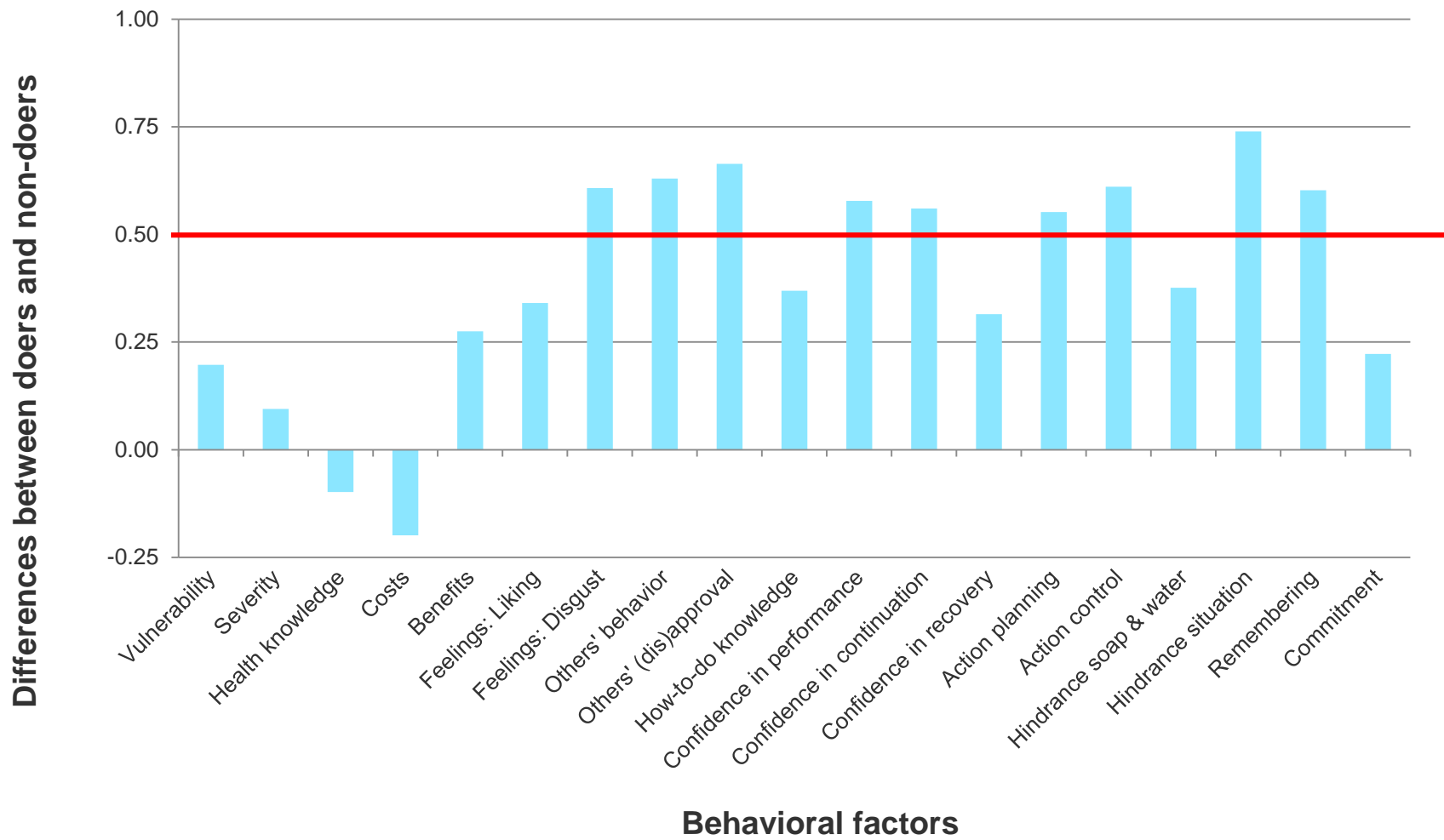
**Doers: handwashing  $\geq 9$  out of 10 times**

Person	Score in perceived effort	Score in others' approval
A	2	4
D	3	3
F	4	4
H	2	2
I	1	1
J	3	4
L	3	4
P	3	3
R	0	0
S	4	4
U	3	3
V	2	4
W	2	3
Mean score	2.46	3.00

**Non-doers: handwashing  $< 9$  out of 10 times**

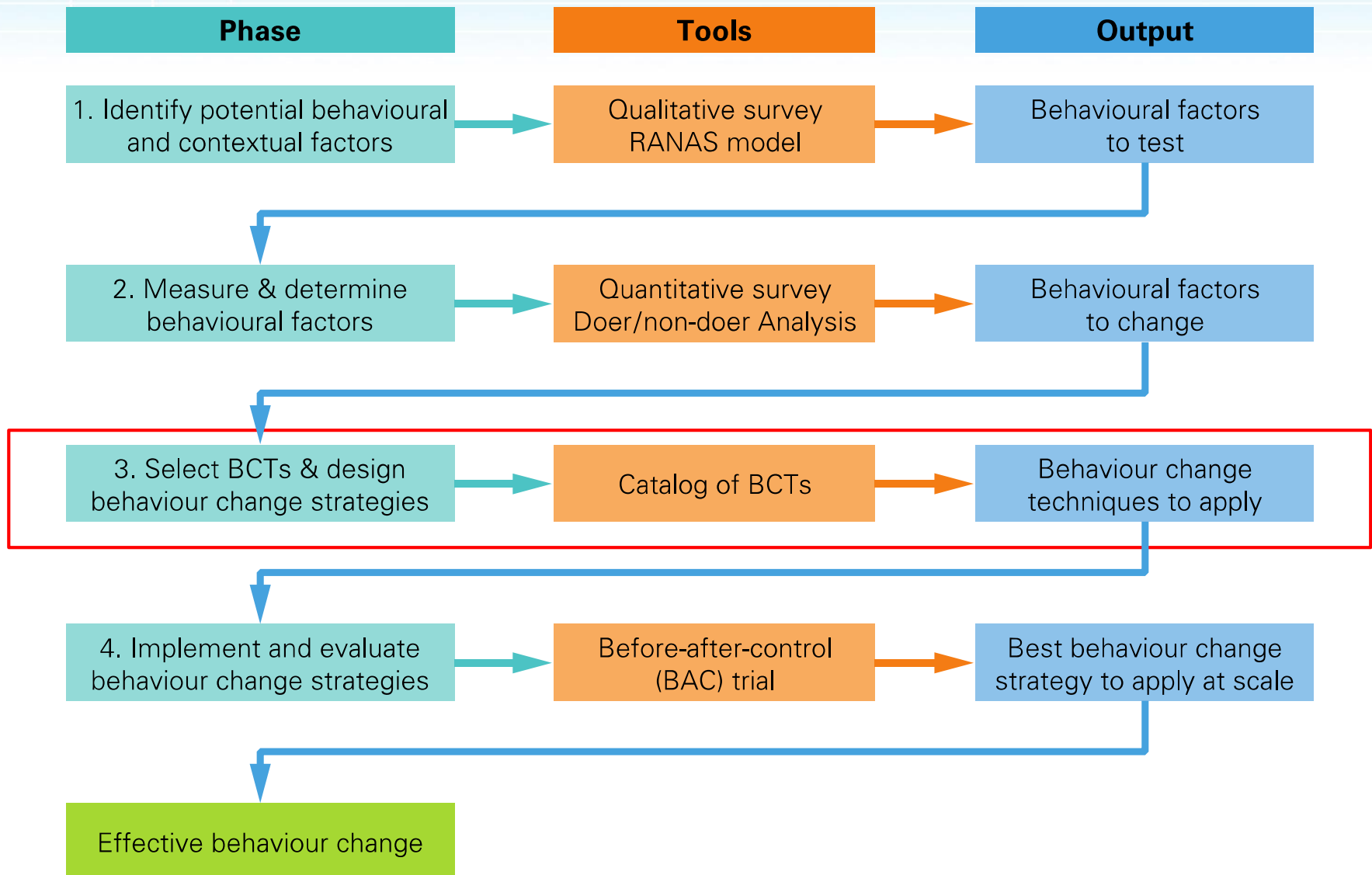
Person	Score in perceived effort	Score in others' approval
B	4	4
C	2	0
E	2	1
G	1	1
K	3	2
M	2	2
N	3	2
O	1	1
Q	0	0
T	1	0
X	1	1
Y	2	2
Z	4	3
Mean score	2.00	1.46

# Doer/non-doer analysis





# The RANAS Systematic Behavior Change Approach



# RANAS Catalog of 36 behavior change techniques

Behavioral factors	Behavior change techniques
<b>Planning &amp; relapse prevention BCTs – Self-regulation factors</b>	
Barrier planning	<p><b>30. Prompt coping with barriers:</b> ask participants to identify barriers to behavior change and plan solutions to those barriers.</p> <p><b>31. Restructure the social and physical environment:</b> prompt participants to remove social and physical bolsters of the undesired behavior so as to interrupt habitual procedures.</p> <p><b>32. Prompt to resist social pressure:</b> ask participants to anticipate and prepare for negative comments from others or for pressures towards the undesired behavior.</p> <p><b>33. Provide negotiation skills:</b> prompt participants to reflect on others' perspectives to find compromises that benefit both sides and arguments bolstering them.</p>
Remembering	<p><b>34. Use memory aids and environmental prompts:</b> prompt the participant to install memory aids or to exploit environmental cues so as to help to remember the new behavior and to trigger it in the right situation.</p>
Commitment	<p><b>35. Prompt goal setting:</b> invite participants to formulate a behavioral goal or intention.</p> <p><b>36. Prompt to agree on a behavioral contract:</b> invite the participant to agree to a behavioral contract to strengthen her/his commitment to a set goal.</p>

# Develop and design behavior change strategies

Strategy 4 (out of 4)

Slogan: Handwashing? Of course! We all do it.

Communication channel: Interpersonal: Community meeting.

BCT 10 Prompt public commitment

Activities: Participants come in front of the community  
They shout the slogan as sign of their commitment

Targeted behavioral factors: Others' behavior



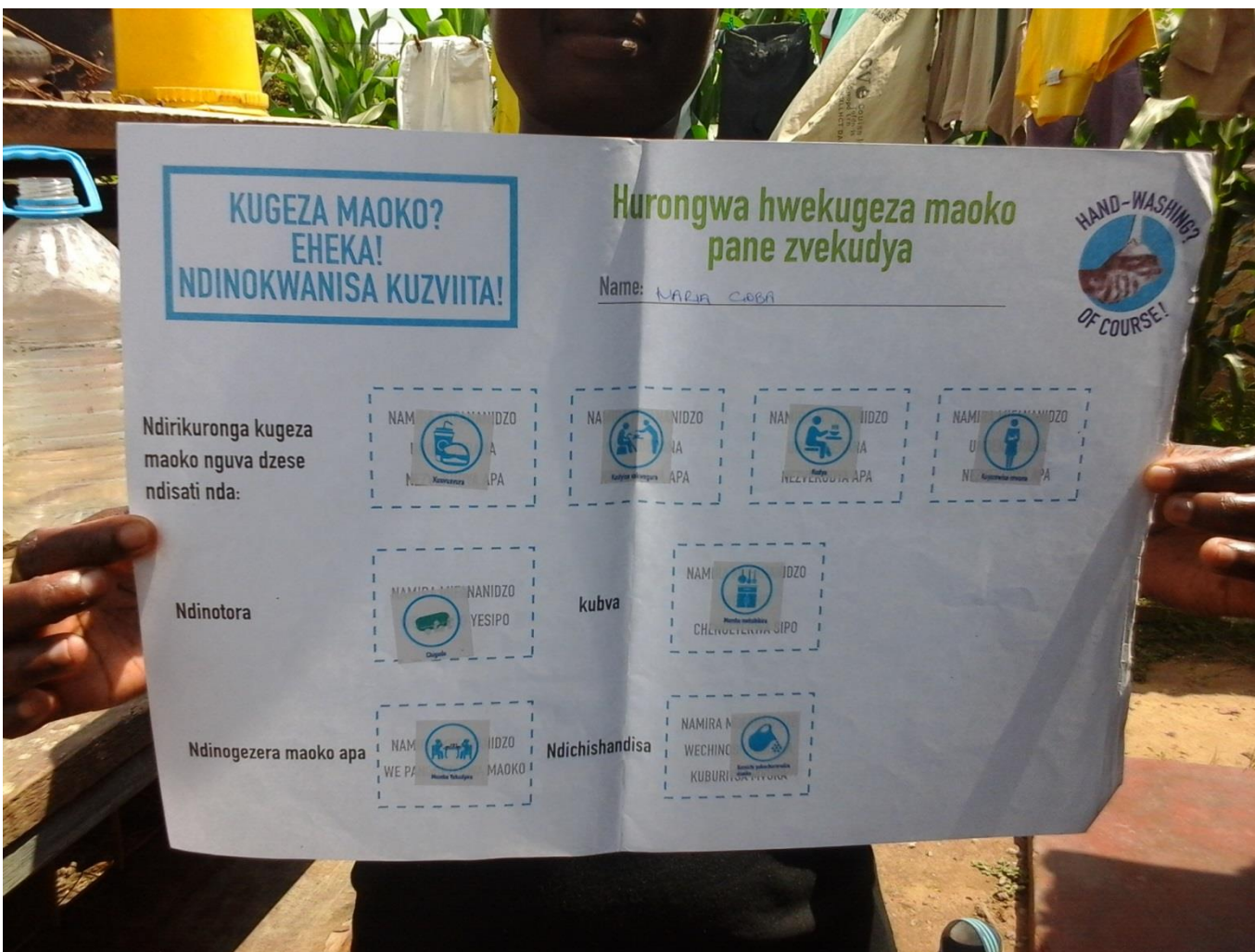
Implement behavior change strategies



*BCT 21 Organize social support*  
*BCT 10 Prompt public commitment*

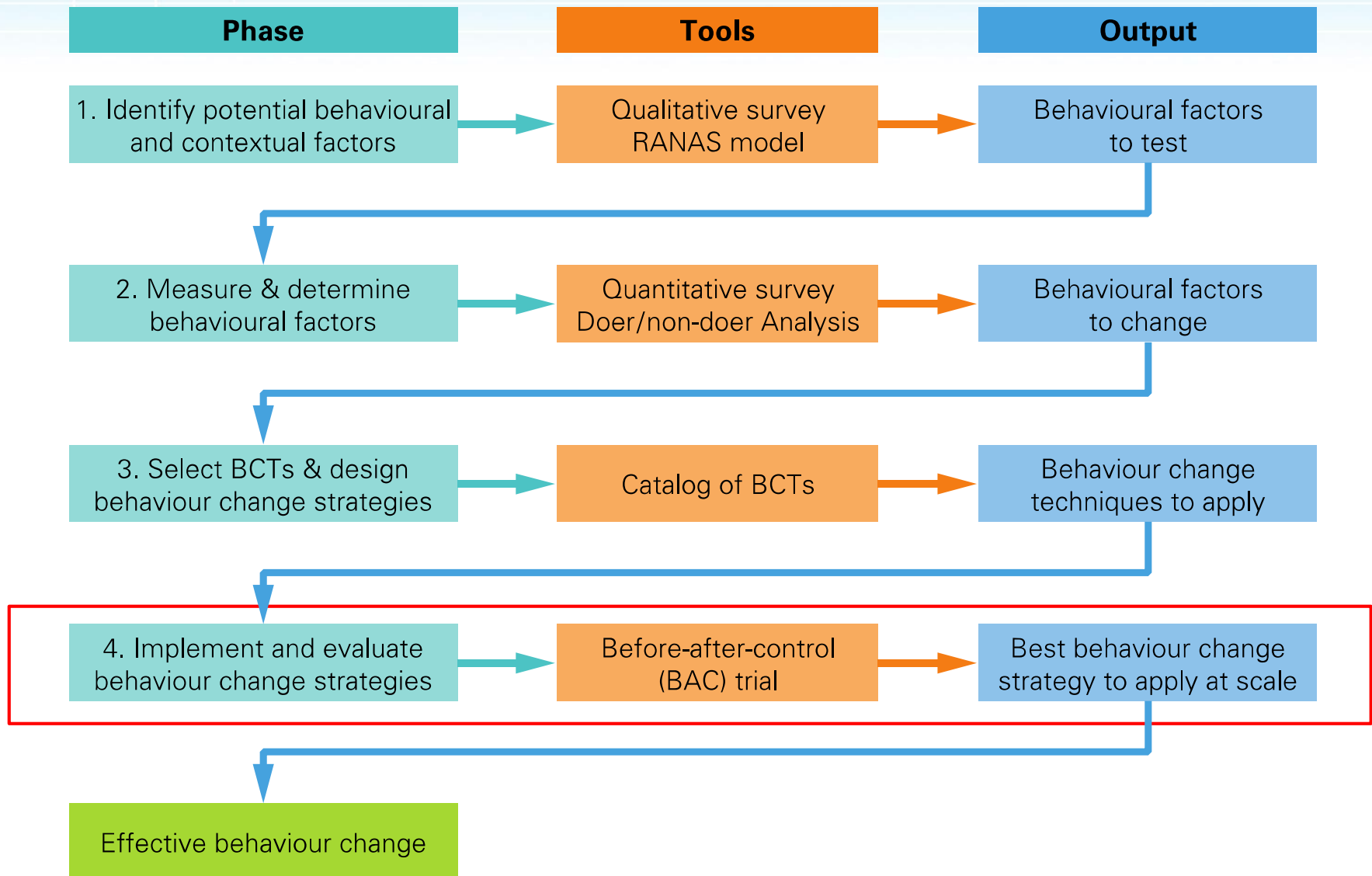


## BCT 26: Prompt specific planning: when, where, and how plans

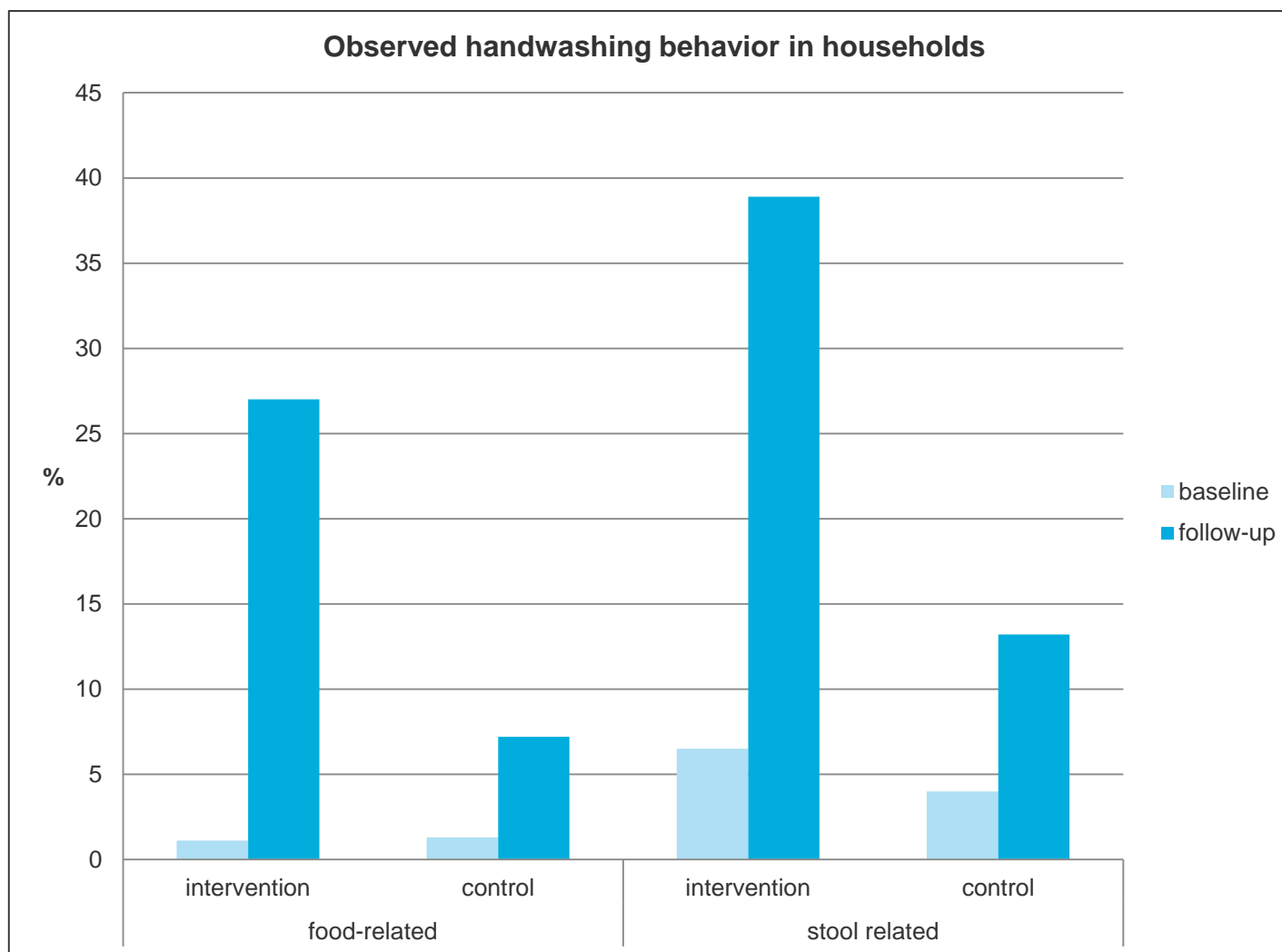


**A plan when to wash hands in Zimbabwe**

# The RANAS Systematic Behavior Change Approach



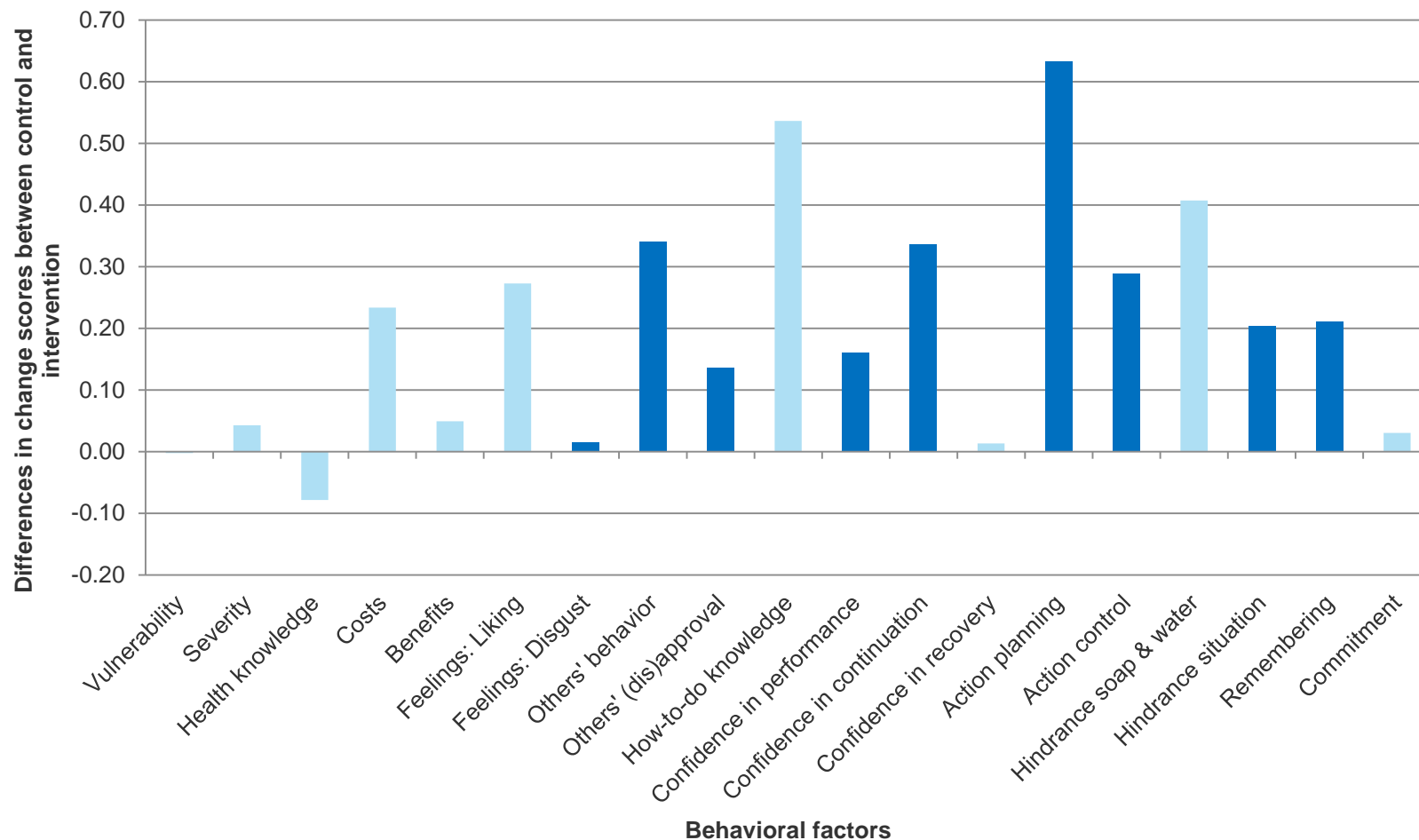
# Evaluation: Change in observed handwashing with soap





# Evaluation: Change in psychosocial factors

*Difference in difference: change in intervention group minus change in control group*



## **Systematic behavior change** using the **RANAS** approach enables:

1. The exact determination of the behavioral factors to be changed
2. The focused selection of the corresponding behavior change strategies
3. Their proven record of success



# Systematic Behavior Change in Water Sanitation and Hygiene

A practical guide using the RANAS approach

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