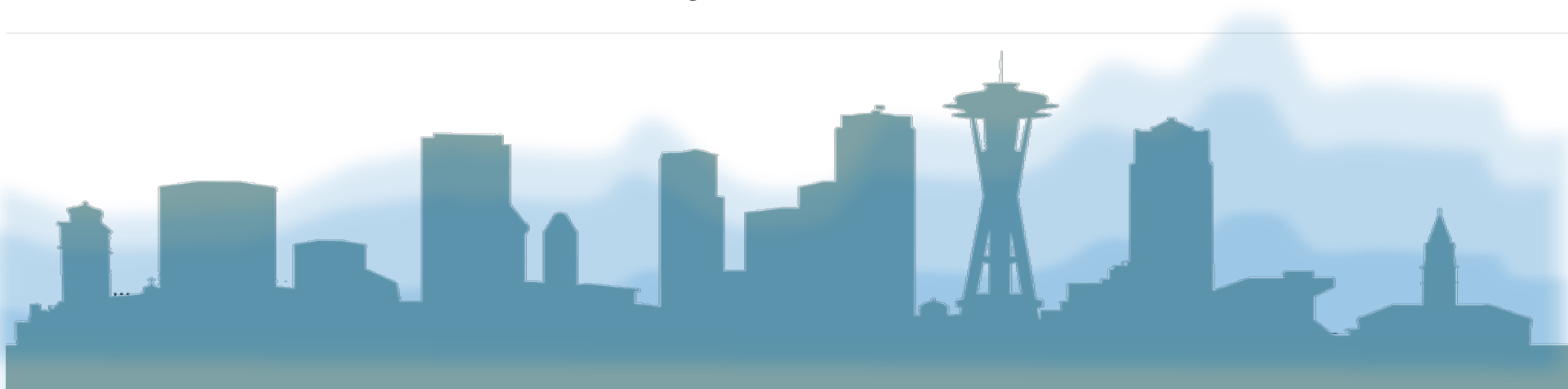# DEMYSTIFYING THE SHOWERING EXPERIENCE

UNDERSTANDING CURRENT SHOWER BEHAVIOR AND SHOWERHEAD PREFERENCES

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Water Efficiency Lab, University of Brighton

Introduction

- At present, showers and showering account for 25-30% of daily per capita water use

- With a total consumption of over two billion litres per day, the shower is the highest water use function in the home

- The demand for separate shower cubicles has been increasing at ~20% per year since 1999

- An efficient shower system can therefore have significant impact on the domestic water and energy consumption.

Introduction

- **Various studies to date have looked at different aspects of shower use, including:**

  - the use of efficient showerhead fixtures in relation to reductions in water use

  - shower performance in the context of awareness and habits

  - influence of shower monitors on water usage

  - comfort, lifestyles, performance or perceived needs against new efficient products.

- **However, no study has explored in any detail the performance parameters that define the degree to which products are accepted or rejected.**
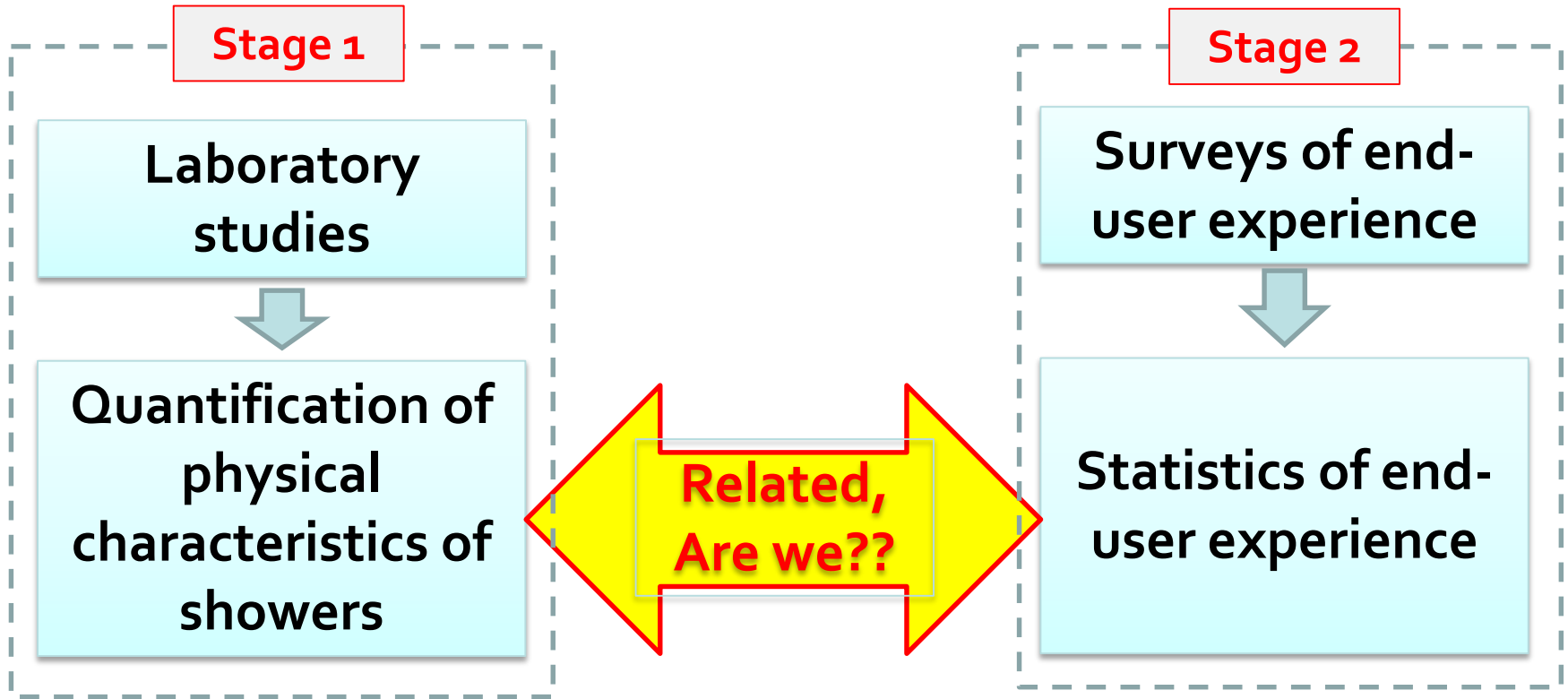
Introduction

- **Issues of interest within current study:**

  - Physical/technological – focusing on the impact of physical or technological changes to achieve water savings, or promote efficient water use by water users;

  - Action/activity – deconstructing water use activities to target and reduce waste whilst preserving the benefits, and to some extent, pleasures derived from such activity.

- **This paper presents preliminary findings from the initial stage of this on-going study**

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Aim and Objectives

- **Aim:** The overall aim of the project is to demystify the performance criteria that inform the user's expectation of 'a good shower' experience

- **Objective:** To begin to define and empirically quantity the conditions and range of acceptability of water efficient shower-heads using:

  - physical and socio-psychological factors, and

  - the effectiveness of the shower product to promote sustained water efficiency practices

Overall project outline

Laboratory studies

Quantification of physical characteristics of showers

Related, Are we??

Surveys of end-user experience

Statistics of end-user experience

This paper discusses the analysis of an initial survey within the Stage 2 programme.

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Methodology – Stage 2

- **The study is underpinned by a participant action methodology which supports the use of a small participant sample to explore knowledge, behavioral and experiential phenomenon**

- **The execution is by means of a 12-12-12 shower challenge**

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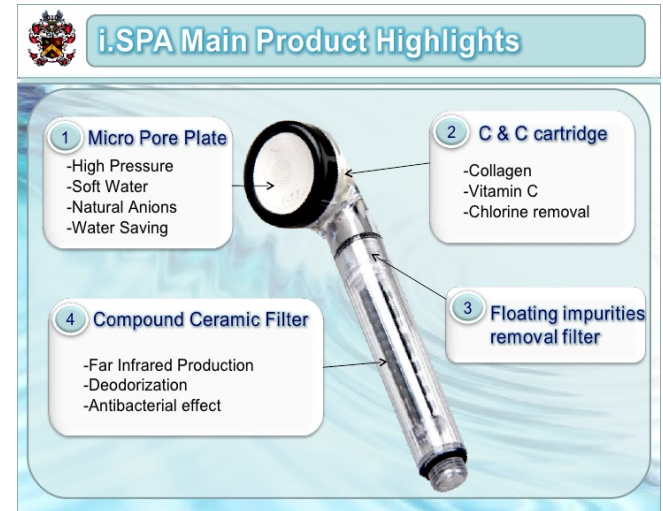
The 12-12-12 Shower Challenge

- **12 Showerheads used by 12 participants over 12 weeks**

  – 2 x control showerheads

- **Participants take turns to use each showerhead for a week, providing feedbacks on each showerhead and the showering experience using the cards provided**

- **Participants take part in a workshop at the end of the 12 week period to help consolidate the findings**

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The participant selection

- **The selection is a two stage process**
  - **Firstly, an open call was made via an email to all staff employed by the University of Brighton for participants for the shower challenge**
    - **Interested participants were then asked to complete an online survey for the second stage of purposive sampling.**
  - **The survey was used to shortlist the final 12 participants: 6 male and 6 female**

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Participant Profile: Location
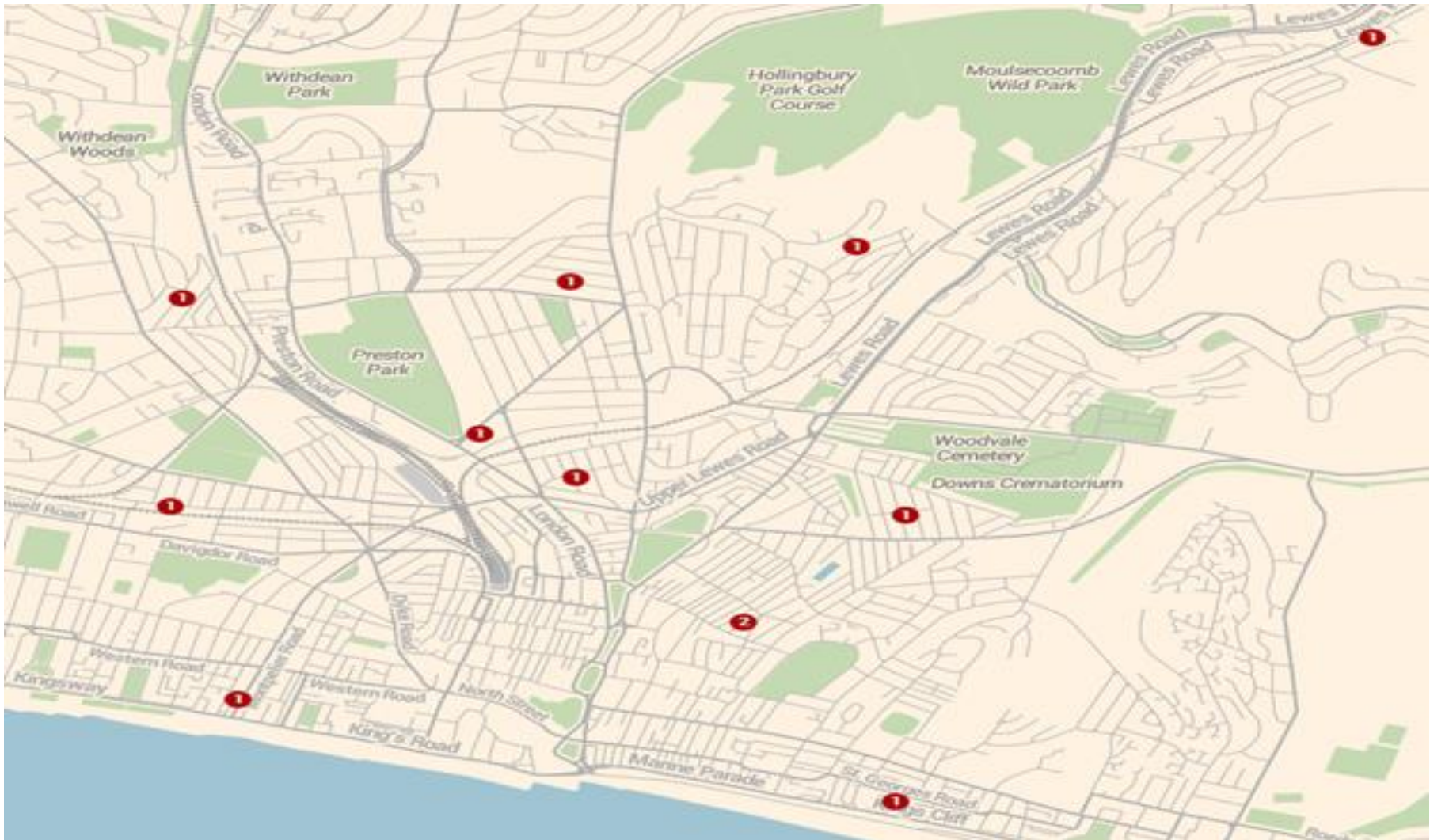
Participant Profile: Anthropometrics
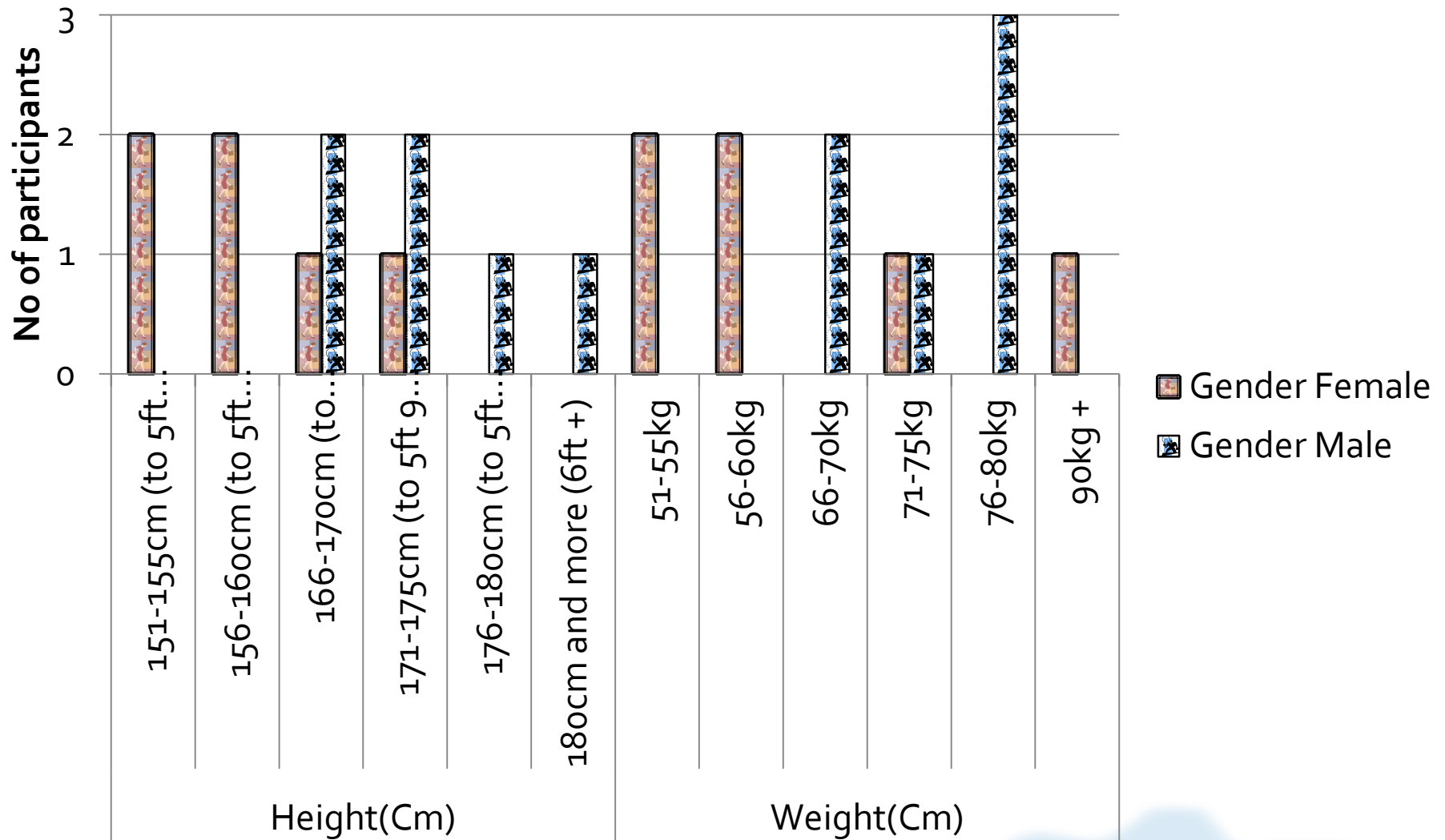
Participant Profile: Demographics

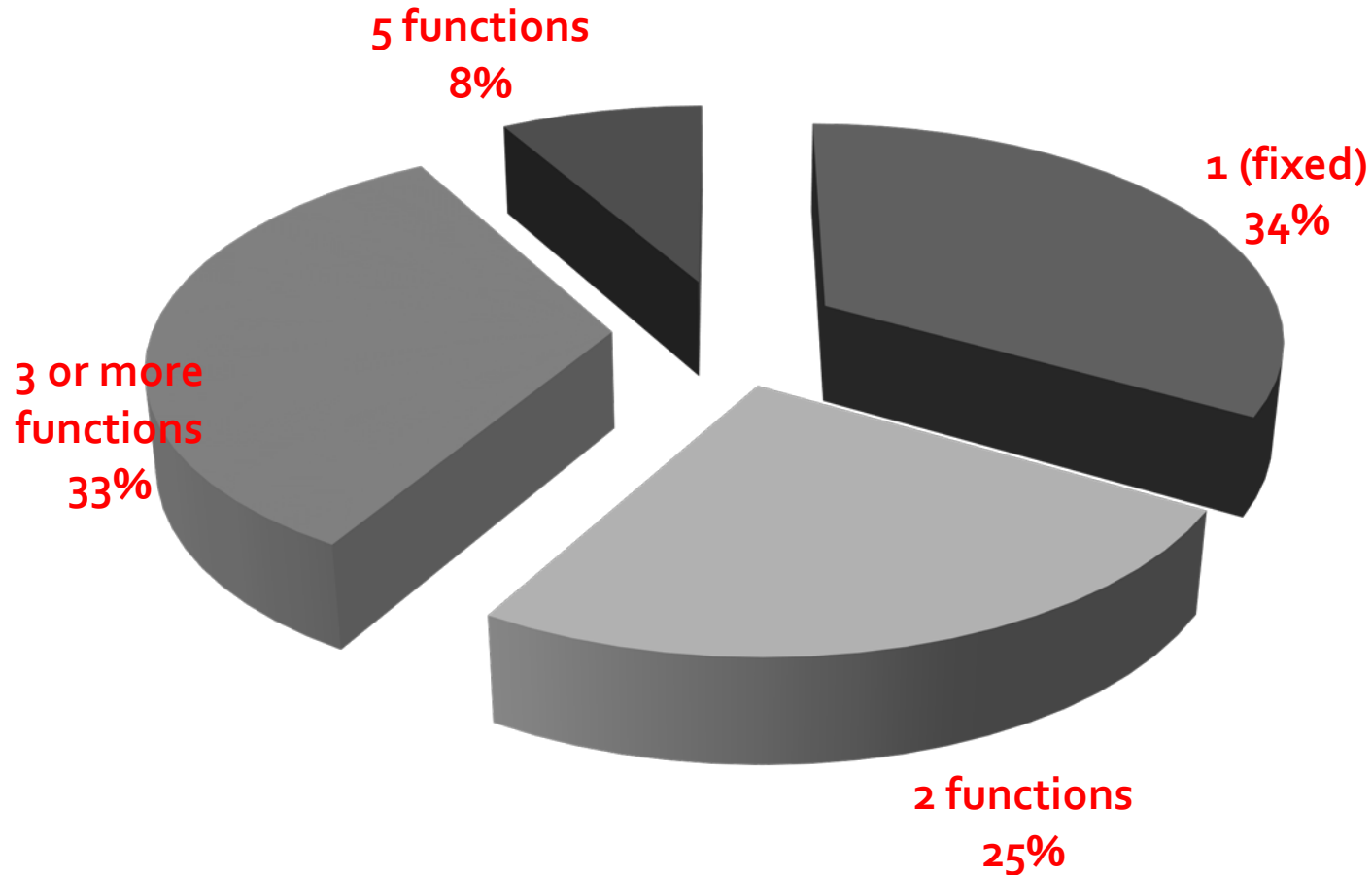|		Gender					Gender	
		Female	Male				Female	Male
Adults in Household (Age_18+)	1	3	4	Children in Household	1		0	1
	2	2	1		2		1	2
Education	Bachelor Degree	1	0	Income	£20,000 - £29,999		3	2
	Currently studying	0	1		£30,000 - £39,999		1	0
	Further Education/ College	0	1		£40,000 - £49,999		1	0
	Posgraduate degree, Doctorate	5	2		£50,000 - £59,999		0	1
	Professional qualification	0	2		£60,000 or more		1	2
Employment_	Employed (full-time)	4	5	Relationship_	Divorced		1	0
	Employed (part -time)	1	0		Married or domestic partnership		3	5
	Student	0	1		Single, never married		1	1
	employed and student	1	0		cohabiting		1	0
Ethnicity	Asian/Asian British	0	1	Religion	All		1	0
	Mixed/Multiple ethnic groups	1	1		Christian (all denominations)		0	2
	Polish Catholic & Jewish	1	0		No religion		5	4
	White	4	4					

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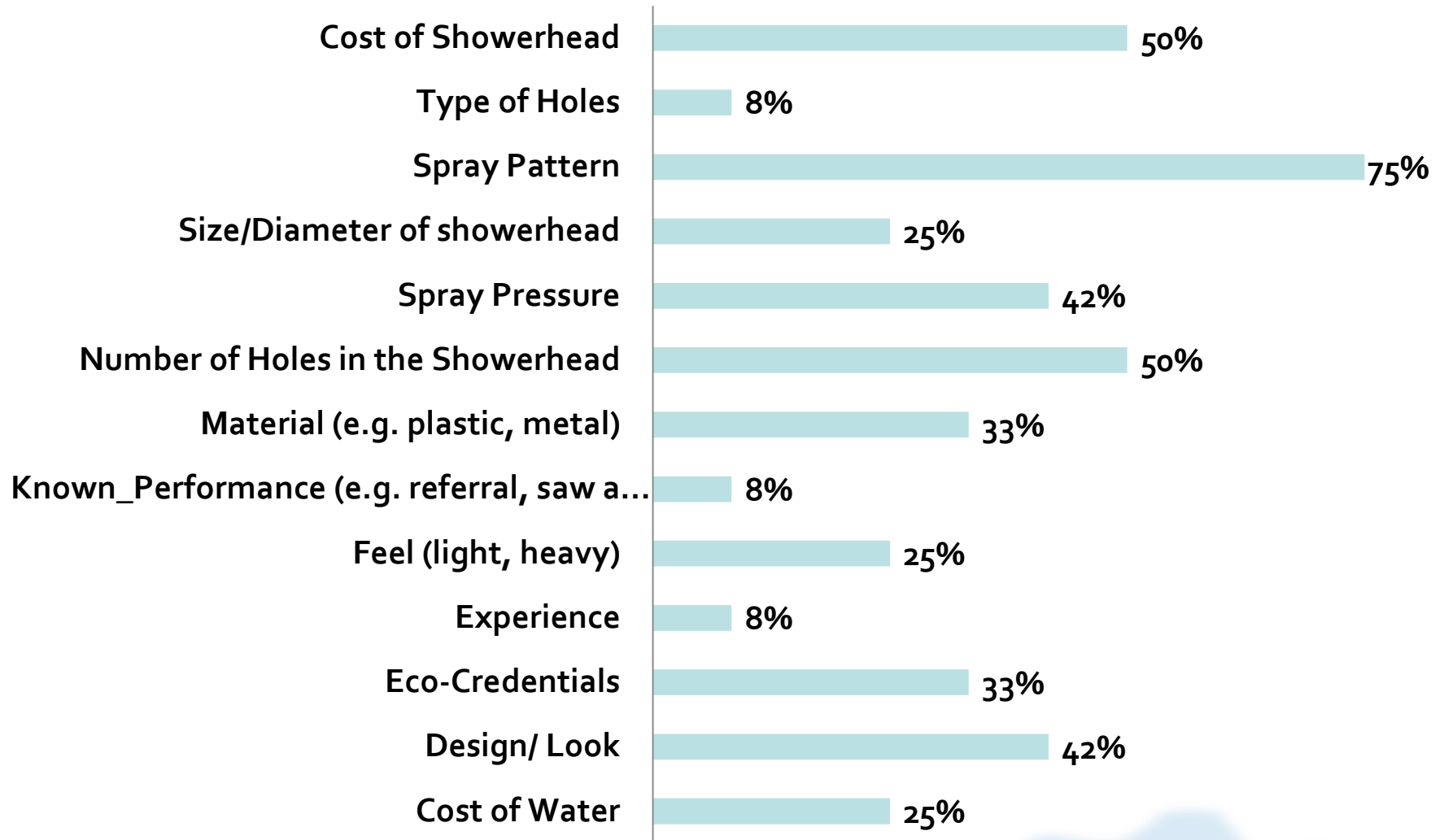
Results: Water supply pressure and overall shower experience
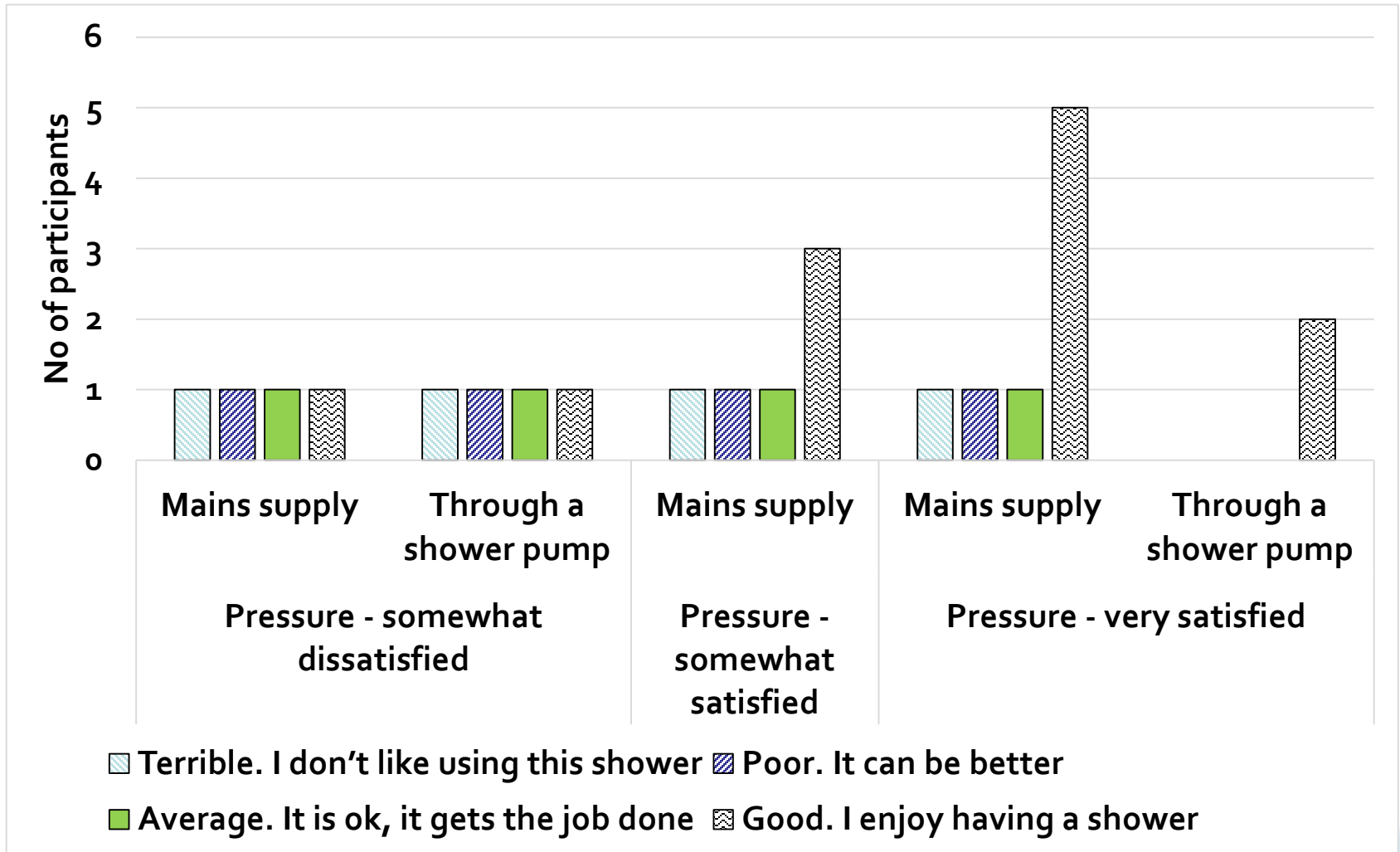
Results: Spray functions in pre-study showerheads

5 functions 8%

1 (fixed) 34%

3 or more functions 33%

2 functions 25%

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Results: The influence of the shower purpose on the duration of the shower

		Morning (before noon)	Afternoon (noon - 6pm)			Evening (after 6pm)	
		As part of my daily routine	As part of my daily routine	To refresh (e.g. after leisure activities)	To relax (e.g. after a work day)	To refresh (e.g. after leisure activities)	To relax (e.g. after a work day)
Duration_Morning	Long (>10mins)	27%					
	Moderate (5-10mins)	64%					
	Quick (< 5 mins)	9%					
Duration_Afternoon	Long (>10mins)		0%	0%	100%		
	Moderate (5-10mins)		0%	50%	0%		
	Quick (< 5 mins)		0%	50%	0%		
Duration_Evening	Long (>10mins)					20%	33%
	Moderate (5-10mins)					60%	67%
	Quick (< 5 mins)					20%	0%

Results: Performance and duration of shower
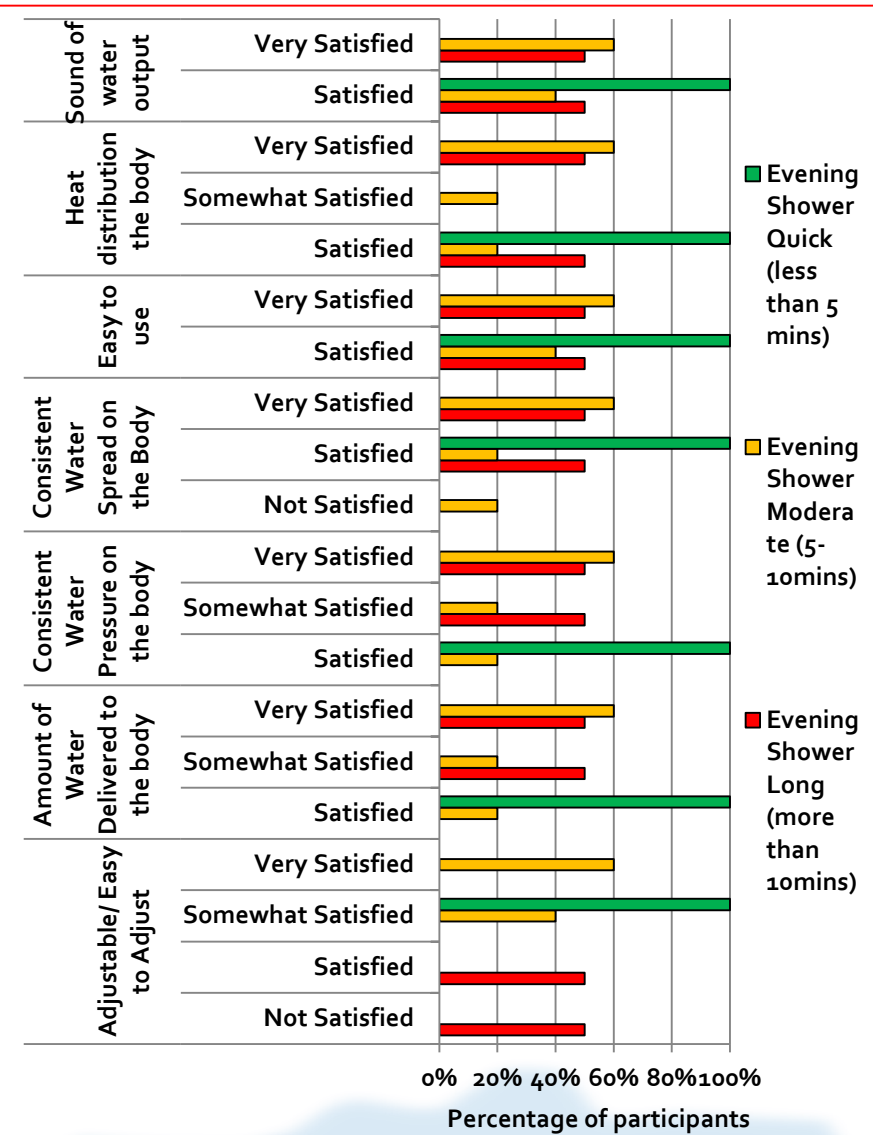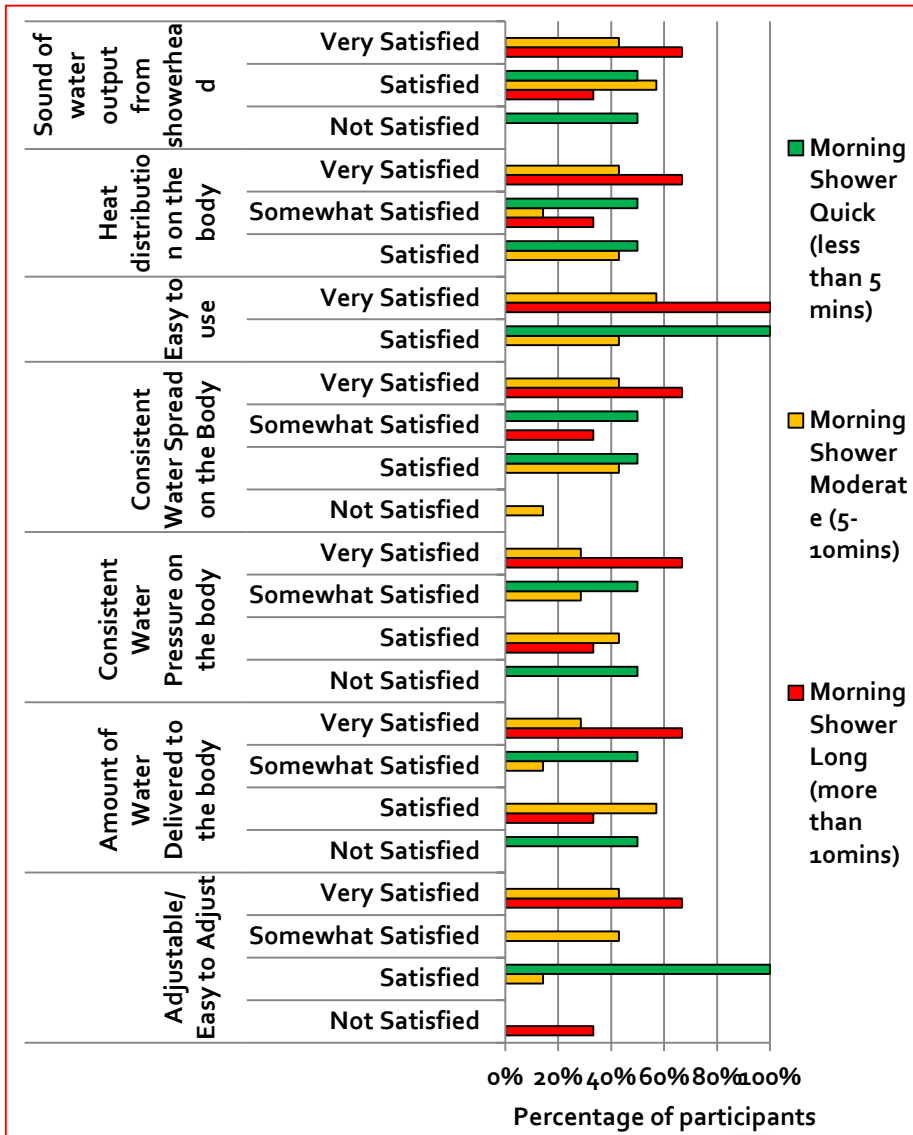
Results: The influence of the shower activity on the duration of the shower

		Morning (before noon)			Evening (after 6pm)		
		>10mins	5-10mins	< 5 mins	>10mins	5-10mins	< 5 mins
Weekday Morning	I always shower at home	30%	60%	10%			
	I seldom shower at home	0%	0%	100%			
	I sometimes shower at home	0%	100%	0%			
Weekday Evening	I always shower at home				100%	0%	0%
	I never shower at home				0%	0%	0%
	I seldom shower at home				0%	50%	50%
	I sometimes shower at home				20%	80%	0%
Weekend Morning	I always shower at home	13%	75%	13%			
	I never shower at home	100%	0%	0%			
	I sometimes shower at home	0%	100%	0%			
Weekend Evening	I always shower at home				100%	0%	0%
	I seldom shower at home				33%	33%	33%
	I sometimes shower at home				0%	100%	0%

Conclusion

- So far, this indicative survey has helped to identify the baseline factors that inform or influence:
  - user choice of showerhead products
  - showerhead performance preferences, and
  - the influence of routine, habit and location of shower activity on the duration

- These factors could start to produce a global picture for understanding what defines a 'good' shower experience

- The findings from this survey also raises interesting questions which can be further explored during and at the end of the 12 week showerhead challenge

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Questions?

THANK YOU

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