

Multimedia Appendix 4

Feedback on the mISkin app provided by participants in the internal pilot study.

mISkin menus	Comments on the app menus (quotes from interviews)	Suggested changes (example quotes)
Skin assessment	'It was good. It was useful.' (P4, Male, SPF15, 27y) ¹	More information on recommended protection: 'It would have been useful if it would tell you what the skin type actually meant a bit more information about the skin type and protection.' (P4, Male, SPF15, 27y)
'How to be SunSmart' menu (videos and UV photos)	<p>Positive: 'I did watch the videos. I think they were good. I didn't realise sunscreen wasn't a total protection against UV. I thought you put sunscreen on and that was it, you were protected all the time.' (P1, Female, SPF15, 33y)</p> <p>'They were short and there weren't boring, straight to the point.' (P4, Male, SPF15, 27y)</p> <p>'There was a couple of little things that kind of stuck with me, like forgetting the top of the ears and how much to put it on.' (P901, Female, SPF30, 27y)</p> <p>Negative: 'The thing that confuse me a bit was that I needed to press back to go back to the video menu.' (P4, Male, SPF15, 27y)</p> <p>'The videos were not working properly. Every time you watched a video it ticked box, and I wanted all the boxes to be ticked, but every time I watched a video it stopped half way through and I couldn't finish. I could only finish some of them and those worked fine and were good.' (P7, Male, SPF30, 32y)</p> <p>UV Photos: 'Photos are good; you get a good picture of what might happen.' (P11, Female, SPF30, 39y) 'It's amazing really, you wouldn't think how much it damages your skin. I wasn't scared; I was a bit</p>	<p>More videos: 'Maybe more videos because they were very short. So I longer list would be better.' (P7, Male, SPF30, 32y)</p> <p>Information on videos transferred to text: 'Maybe instead of videos, have it in text information. Cos sometimes you don't want the noise.' (P11, Female, SPF30, 39y)</p> <p>No suggestions were made.</p>

¹ Quotes references are organised by participant ID, gender, SPF allocation and age.

	amazed, a bit shocked. I am quite cautious anyway.’ (P901, Female, SPF30, 27y)	
‘Sun safety quiz’ menu	<p>Positive: ‘I like those kind of things and I think it was useful especially if you don’t have any background knowledge it kind of helps you.’ (P4, Male, SPF15, 27y)</p> <p>‘I went through the quiz and it was useful, good. I think it was good information, not a lot, fair amount.’ (P7, Male, SPF30, 32y)</p> <p>‘Most of the stuff I already knew but it was a good reinforcement.’ (P11, Female, SPF30, 39y)</p> <p>Negative: ‘That was all common sense. Possibly a little simplistic.’ (P1, Female, SPF15, 53y)</p>	No suggestions were made.
‘Sun Alert service’ menu (prompts and sun protection habits monitoring)	<p>Positive: ‘I liked the suggestions it had as well, because it wasn’t like demands of you, like ‘put more sunscreen!, it was more kind of suggestions it was things that you would think it was sun protection, like suggestions to go for lunch inside. And it is your choice still. I think it’s different from the normal kind of advice you get about sun protection, like you must, must, must.’ (P4, Male, SPF15, 27y)</p> <p>‘Too many reminders? no, in fact I’ve turned the reminders up, because I know that I burn easily. So I had it on every hour so I was more aware of what it was going on so that I would remember. They always worked fine.’ (P4, Male, SPF15, 27y)</p> <p>‘The GPS worked fine, it was always on. As soon as I went outside I would check my phone to see if it was detecting properly. Actually the house that I was in had a terrace and it would sometimes pick it up.’ (P4, Male, SPF15, 27y)</p> <p>‘The alerts were very good. Because normally I think people they are used to receive texts to remind them about bank accounts. But when you get a text like this, maybe you are thinking about drinking or eating and you are aware again of what you are up to, how the environment is. The suggestions didn’t make a difference for me, because I was already engaging in something and it wouldn’t change my mind.’ (P7, Male, SPF30, 32y)</p> <p>‘I did it manually. It’s a bit of reminder and it tells you how long you’ve been out you don’t realise sometimes how long you’ve been out.’ (P901, Female, SPF30, 27y)</p> <p>Negative:</p>	<p>System more interactive and intelligent:</p> <p>‘Maybe something about what you are doing that day and then maybe relating that to how you should be protecting yourself. Cos it might vary quite a lot from day to day. I think it would make it better.’ (P8, Female, SPF30, 31y)</p> <p>‘If you know what temperature is going to be for the specific location or the UV and if you can tell how long people have been in the sun and also my skin type, like a sort of timer that you tell you when to reapply.’ (P9, Female, SPF15, 53y)</p> <p>‘Also over time the app could also learn how the users interact. If someone’s always being sun smart, then you can sort of fade it into the background and only periodically interact again. As it not always applicable really.’ (P18, Male, SPF30, 31y)</p>

<p>‘The other thing was I thought it would ask more questions and it was quite easy to have a look at what it said ‘have you packed everything for the day?’ and it’s too easy just to press ok and forget about it or if you are off doing things you don’t hear it bip. And I thought it would prompt throughout the day ‘have you put in more sunscreens, have you been in water’.’ (P1, Female, SPF15, 33y)</p> <p>‘I didn’t find the suggestions very useful at all. If you are you lying on a beach, you are not going for a stroll if the reminders tell me to.’ (P9, Female, SPF15, 53y)</p> <p>‘On the days it was cloudier; it was still giving me those tips, which wouldn’t apply to me. But on the sunnier days, it worked properly. I got more used to do it as the week went on and I would do it during lunchtime and everything.’ (P901, Female, SPF30, 27y)</p> <p>‘It would start automatically at 9am and it would say I was outdoors. GPS was on all the times. It wasn’t picking up indoors or outdoors and sometimes I was changing indoors/outdoors, but I didn’t remember to do it all the time.’ (P15, Female, SPF30, 51y)</p> <p>‘Apart from not knowing how to turn it on and off, that was perhaps the only downside and also I don’t think it ever properly connected with the GPS. On the app it would only say initializing GPS, but it never gave an indication that there was a GPS connection and it never displayed the GPS icon like it does in maps or other apps. So I’m not sure if it was working properly and it capture the location properly.’ (P18, Male, SPF30, 31y)</p> <p>‘I didn’t receive any of the prompts. The only thing I saw was the questions about what I was using. My mobile didn’t work properly. I guess if the reminders worked it would have been better and useful.’ (P22, Female, SPF15, 42y)</p> <p>‘Sometimes it would say ‘you’ve outdoors for x amount time’ and it wouldn’t be correct. GPS was on all the time.’ (P30, Female, SPF30, 24y)</p> <p>‘I didn’t get the alerts. I only got the one where you have to say what methods of sun protection you are using. Every day.’ (P30, Female, SPF30, 24y)</p> <p>‘Battery life was poor by running GPS and the phone needed constantly charging. I stayed in the same resort 90% of the time so why GPS constantly required.’ (P32, Male, one SPF30/one SPF15, 58y)</p> <p>‘Locked between 8am to 6pm and if not out of sun at 6 then next morning assumed still in sun. Also I was getting up for a run at 7.30 and applying sun screen but could not record it on the app.’ (P32, Male, one SPF30/one SPF15, 58y)</p>	<p>‘I felt that the app wasn’t really interested in what I was doing cos after adding the information about what I was doing it wasn’t adding much to the information given. Some feedback or praise would probably make it better. Or made stating the benefit once in a while but then you also run into the problem of message being repeated too often.’ (P18, Male, SPF30, 31y)</p> <p>Extra option on system about weather:</p> <p>‘It wasn’t relevant if it wasn’t sunny. Maybe have an option I’m outside but it’s not sunny/hot.’ (P901, Female, SPF30, 27y)</p> <p>GPS and phone battery:</p> <p>‘I wonder if there is a way to make it to run in the background without using so much battery. Maybe a way without using GPS. And give you push notifications without you needing to start the app at all times.’ (P11, Female, SPF30, 39y)</p>
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	<p>‘My biggest complaint was that the app seemed to be constantly nagging me to do what I was aware I could do, anyway. It was like being on holiday with my mother.’ (P32, Male, one SPF30/one SPF15, 58y)</p> <p>‘[EMA] I guess it didn’t offer too much, there was more a data collection tool than anything else so I was asking me about my sun protection habits, but it I don’t think it did that too much proactively to make me think about using sunscreen or sun protection in general.’ (P18, Male, SPF30, 31y)</p> <p>‘[EMA] No OK button when changing in the details – never quite sure if data has been accepted.’ (P32, Male, one SPF30/one SPF15, 58y)</p>	
UV levels texts	<p>Positive:</p> <p>‘They helped me. You look at the window and you see how much sun you have and you correlate with the information you try to understand it better.’ (P7, Male, SPF30, 32y)</p> <p>‘Receiving the texts to remind you about the UV index worked as a prompt to remember to put sunscreen on. I think this actually the first time in a while that I don’t have a sunburn at all.’ (P11, Female, SPF30, 39y)</p> <p>‘With the texts messages it was quite nice to get at the end of message ‘have fun or enjoy your holidays.’ (P18, Male, SPF30, 31y)</p> <p>Negative:</p> <p>‘The UV messages were really helpful. But I did think that based on the fact that I had absolutely no idea what spectrum the UV ranges 3 or 4 – if there are high – but I thought based on that you would have prompted more or it might be that that is quite low – I don’t know. But I did think it would say ‘have done this, have you done that’. I just think it would make me think more ‘oh I better take the sunscreen’. But cos it wasn’t as interactive as I thought it would be, it was easy to ignore and just press ok.’ (P1, Female, SPF15, 33y)</p> <p>‘There were useful. But what does UV 7 mean? I kind of looking outside I know it would mean it was a strong sun. But I guess if it was cooler I might not know what a UV level would mean and how I should be protecting from the sun.’ (P4, Male, SPF15, 27y)</p> <p>‘No, it wouldn’t really mean anything. I wasn’t sure what to do based on that. I would like to know more what things I would have to do to protect myself based on that.’ (P15, Female, SPF30, 51y)</p> <p>‘Texts message were helpful. It always gave the UV index level and I never really understood what it was and what does that mean. What am I meant to do with that information?’ (P18, Male, SPF30, 31y)</p> <p>‘UV state was constant 7 – why not send initial text then one when anticipated change?’ (P32, Male, one</p>	<p>Integrated in Sun Alert Service:</p> <p>‘It would be useful if the information I receive through the text messages could be integrated in the app and the notifications. It didn’t seem unified.’ (P18, Male, SPF30, 31y)</p> <p>More explanations on UV levels Index meaning:</p> <p>‘If there was sort of a scale explaining what the difference would be about getting sunburn, personalised risk information.’ (P18, Male, SPF30, 31y)</p>

	SPF30/one SPF15, 58y)	
General feedback	<p>General benefits: ‘I think apart me remembering to use it, which by the end of holidays I was doing that. It was quite good because it trigger me to apply sunscreen and to apply more and more often.’ (P9, Female, SPF15, 53y) ‘But having the app installed and having it running in the background, every time you open your phone I see the icon right there and it makes you think a little bit.’ (P18, Male, SPF30, 31y)</p> <p>‘A constant reminder. If you’re not very strict with sunscreen then it’s good to keep getting reminders because sometimes goes by very quickly and you don’t think even notice time going by and that you need to top up on sunscreen.’ (P30, Female, SPF30, 24y)</p> <p>Easiness of use and interaction: ‘The symbols were clear and the app is quite easy to interact with and straightforward.’ (P1, Female, SPF15, 33y)</p> <p>‘I think everything that is in the app needs to be there and it made sense why it was all there. It wasn’t surprising.’ (P4, Male, SPF15, 27y)</p> <p>‘I don’t think there was too much information on the app, cos you could pace it suit yourself.’ (P9, Female, SPF15, 53y)</p> <p>Attractiveness: ‘The app itself is attractive.’(P1, Female, SPF15, 33y); ‘I liked the colours, it was appealing.’ (P22, Female, SPF15, 42y)</p> <p>More information about how to use the app: ‘More information about what to do with app before.’ (P15, Female, SPF30, 51y)</p> <p>‘A leaflet explaining the app would be good.’ (P1, Female, SPF15, 33y)</p> <p>Type of holiday or practicality: ‘So it probably depends what kind of holiday you are going on (...).I don’t know how practical it would be to carry my phone around all the time on holiday.’ (P1, Female, SPF15, 33y)</p> <p>Drained of battery: ‘Battery life was poor and the phone needed constantly charging.’ (P32, Male, one SPF30/one SPF15, 58y)</p>	

