

B.3 Codebooks

Table 5: Codebook used for the interview study

Theme	Category	Code Group	Code
Own S&P Behavior	protection strategies	authentication	secure, individual passwords
			using 2FA
			lock device
		tracking prevention	cookie management
			delete cache
			tracking blocker
			vpn
		reduce data collection	limit account data
			no data storage of private data on (US) servers
			camera covers
	manage permissions		
	no usage of social networks		
	security tools	secure messengers	
		limit number of services	
		refrain from using specific providers and services	
		device encryption	
	anti-phishing	anti-virus software	
updating			
reasons for not using S&P	social	checking of links	
	time	checking of attachments	
conflicts	negotiate interests with partner	social exclusion	
		not wanting to hinder others	
		not wanting to waste time in meetings	
		social networks	
		smart home devices	
Intervening	attempts to raise awareness	topic	authentication on shared devices
			data breaches
			hacks
			policy updates
			known scams
			exploits
			eavesdropping
			new security mechanisms (e.g., 2FA)
		overall protection mechanisms (e.g., Tor)	
		how	media:videos
	media:news articles		
	strategy: initiating cost benefit analyses		
	strategy: data leaks		
	strategy: explain consequences		
	strategy: demonstrate consequences		
	strategy: share experiences		
	strategy: pranks		
	strategy: avoid negative framing		
	recipient	family	
		friends	
		acquaintances	
		colleagues	
	no recipient	fellow students	
		elderly people	
		not personally close	
	motivation to use S&P	authentication	uninterested in S&P
			secure password
frequent password updates			
enter password in secret			
usage of services & providers		do not note password	
		use 2FA	
		secure messaging	
intervening		secure OS	
		updating systems	
		if bad consequences	
		if related to own data	

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Table 5 – Continued from previous page

Theme	Category	Code Group	Code
	asked for advice	topics	if consequences for self
			if related to job
			if people rely on advice
			if people are close
			authentication:passwords
			authentication:2fa
			usage providers and services
			protection:tools
			protection:updates
			data collection:entering
			data collection:service specific
			data collection:personalized advertising
	attacks:phishing spam		
	attacks:hacking		
	asked for advice	who	parents
			family
			friends
			acquaintances
			colleagues
			fellow students
			customers
			met on party
			younger people
			evaluation
	negative		
	responsibility	for whom	parents
			parents digital housekeeping
further family			
close friends			
customer			
why		take care of technology	
		emotional closeness	
		more knowledge	
why not		close friends	
		advice given	
Conversations	triggers	others observe S&P behavior	tools
		need to act	media reports about issues on owned device
		specific stimuli	prompt to act by provider
		problem support	news
	social situations		spam mails
			forgotten password
			during overall techsupport
	communication	topics	sitting in front of PC
			use PC of others
			share wifi password with visitor
			decision for devices
			usage of protection mechanisms
			abstain using services
			data capturing social network
		current security breaches	
incidents (e.g., data breaches)			
explain technological background			
conversation start	research topic		
communication partner	tech-savvy interested people		
Obstacles	obstacles	lack of opportunity	lack of interest
			no communication channel
			no witnessing others' behavior
			others do not witness own behavior
	lack of resources	too complicated	
		too much effort	
		missing knowledge	
	fearing negative impressions	not be missionary	
		not be lecturing	

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Table 5 – Continued from previous page

Theme	Category	Code Group	Code	
		fearing conflicts	not be elitist	
			fear negative reactions	
			not annoy others	
			others should not feel bad	
			not judge behavior of others	
		lack of legitimacy	do not be intrusive	
			too intimate topic	
			there is no objectively "right" level of privacy	
			behavior does not always match intention	
			losing data after encryption	
bad experiences		problems after update		
Reactions	reactions (others)	positive	interest	
			acceptance	
			understanding	
			gratefulness	
		negative	no interest	
			fear	
			being derided	
			tin foil hatters or nerd	
		neutral	surprise	
		impact on own behavior	insight	
			too complicated	
			no long-term changes	
	long-term impact on others			
	reactions (own)	positive	feeling smart	
			be happy about giving cause of thought	
		negative	being annoyed	
			resign	
		neutral	understanding counterarguments	
			being puzzled	
		personal feelings	do not take it personally	
		attack on person		
	wish for interest			
impact on own S&P behavior		critical reflection of own behavior		
		integrate counterarguments in research		
		show S&P behavior more often		
Perception	perception as expert		field of study	
			work	
			interest	
			provided support	
			gender bias based on stereotypes	
	perception as nerd		avoid being perceived as nerd	
			you're not perceived as nerd if...	
			being perceived as a nerd is positive	
	S&P characteristics	demographics		age
				education
				technical expertise
		knowledge		awareness of consequences
				interest
				anxiety
		personality		relaxedness
				curiosity
				determination
	looks			

Table 6: Codebook used for the co-creation workshops

Theme	Category	Code
Set a Constructive Dialogue Space	Constructive Atmosphere	obstacle_avoid judgement
		obstacle_lack of social norms
		solution_accept use case of help seeker
		solution_accept lack of knowledge
		solution_make no big deal out of it
		solution_give user time to make up their thoughts

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Table 6 – Continued from previous page

Category	Code Group	Code	
	Establish Contact	obstacle_it is not known that one is an S&P adept	
		obstacle_do not feel like having enough sec. expertise	
		obstacle_don't always act on own priv. standards	
		obstacle_users are not interested in talking about S&P	
		solution_signal approachability	
		solution_define official roles	
		solution_hand over responsibility	
		solution_offer expertise in clubs and communities	
		solution_use media coverage as icebreakers	
		solution_use media coverage as reminder to approach users	
	Build Trust	solution_refer to unrealistic movies	
		solution_conduct awareness campaigns	
		solution_define official S&P days	
		obstacle_ensure quality of support	
		obstacle_prove that one has expertise	
		obstacle_making the quality of support assessable for users	
		obstacle_S&P is sensitive topic	
		obstacle_statements on data collection practices are hard to believe	
		solution_certification	
		solution_rating scores for advice	
Harness the Potential of Exchange	Promote Exchange Between S&P Adepts	solution_visualize impact of advice	
		solution_meet in person	
		solution_institutions have to back up statements	
		obstacle_not enough expertise for a specific topic	
		obstacle_not want to let people down	
	Promote Exchange Between Users	obstacle_wish to remain status as expert	
		solution_refer users to other S&P adepts	
		solution_share successful tactics and strategies for support	
		obstacle_lack of time	
		solution_snowballing users to help each other	
Facilitate Knowledge Transfer	Find Common Ground	solution_create peer-system in schools	
		obstacle_finding a shared terminology	
		obstacle_users have false mental models	
		obstacle_deciding which basics are necessary for understanding	
		solution_dictionary	
		solution_use consistent terms	
	Show S&P Relevance	solution_identify and use successful metaphors	
		solution_communication training for S&P adepts	
		solution_pedagogical flowchart	
	Enable Remote Access	obstacle_users don't see relevance of S&P	
		obstacle_S&P is often not observable	
		solution_explaining risks	
	Strengthen Capabilities and Opportunities for S&P Adepts	Improve Expert Knowledge	solution_visualize impact of S&P settings
			obstacle_understanding problems in remote communication
			obstacle_helping remote on mobile devices
solution_enable mobile screen sharing			
Reward Support-Giving		obstacle_keeping up to date	
		obstacle_identify knowledge gaps	
		solution_no paywalls	
		solution_summarizing research results	
		solution_test your knowledge quiz	
		obstacle_support conflicts other professional goals	
		obstacle_support does not pay off	
		solution_integrate support in work life	
solution_recognizing support as career achievement			
solution_gamification			
solution_emphasize social aspects of support-giving			
solution_trade support for other help			

Post your name here

Draw your mood!

Post your name here

Post your name here

Post your name here

Post your name here

Post your name here

Post your name here

IT Security & Privacy Experts

Facilitators & Obstacles

Imagine that people who are close to you (e.g., family, friends, colleagues) act more secure and privacy-preserving than they do at the moment. Your expertise has helped them to be more motivated and better informed in this area. What factors helped you achieve the goal and what were obstacles you had to overcome?

⌚ 15 minutes

2 Define the problem statement

What problem are you as a group trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

⌚ 2 minutes

How Might We [Insert Problem Statement]?

3 Brainstorm: 5-3-4

Write down any ideas that come to mind that address your problem statement. Remember, the key rules of brainstorming are:

Defer judgment	Go for volume	Build on the ideas of others	Stay on topic	Encourage wild ideas	Be visual
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PRO TIP: Select a sticky note and click the pencil icon in the menu to sketch.

⌚ 15 minutes

4 Present your ideas

Ask questions until all solution ideas are clear to you.

⌚ 10 minutes

5 Dotmocracy

Everyone gets 5 points to vote now, how, wow. You can use all 5 points to vote for one solution or split them across solutions as you like.

now: easy to implement	how: (not) hard to implement	wow: awesome idea
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⌚ 5 minutes

Group 1

now:

how:

wow:

Group 1

now:

how:

wow:

Group 1

now:

how:

wow:

Group 1

now:

how:

wow:

6 Discuss

Please explain what you like and where you have concerns. Discuss how your favorite "wow" solutions could be improved.

⌚ 25 minutes

PRO TIP: Use the cursors to point at where a sticky note should go on the grid.

Figure 1: Mural board components used in the co-creation workshops.

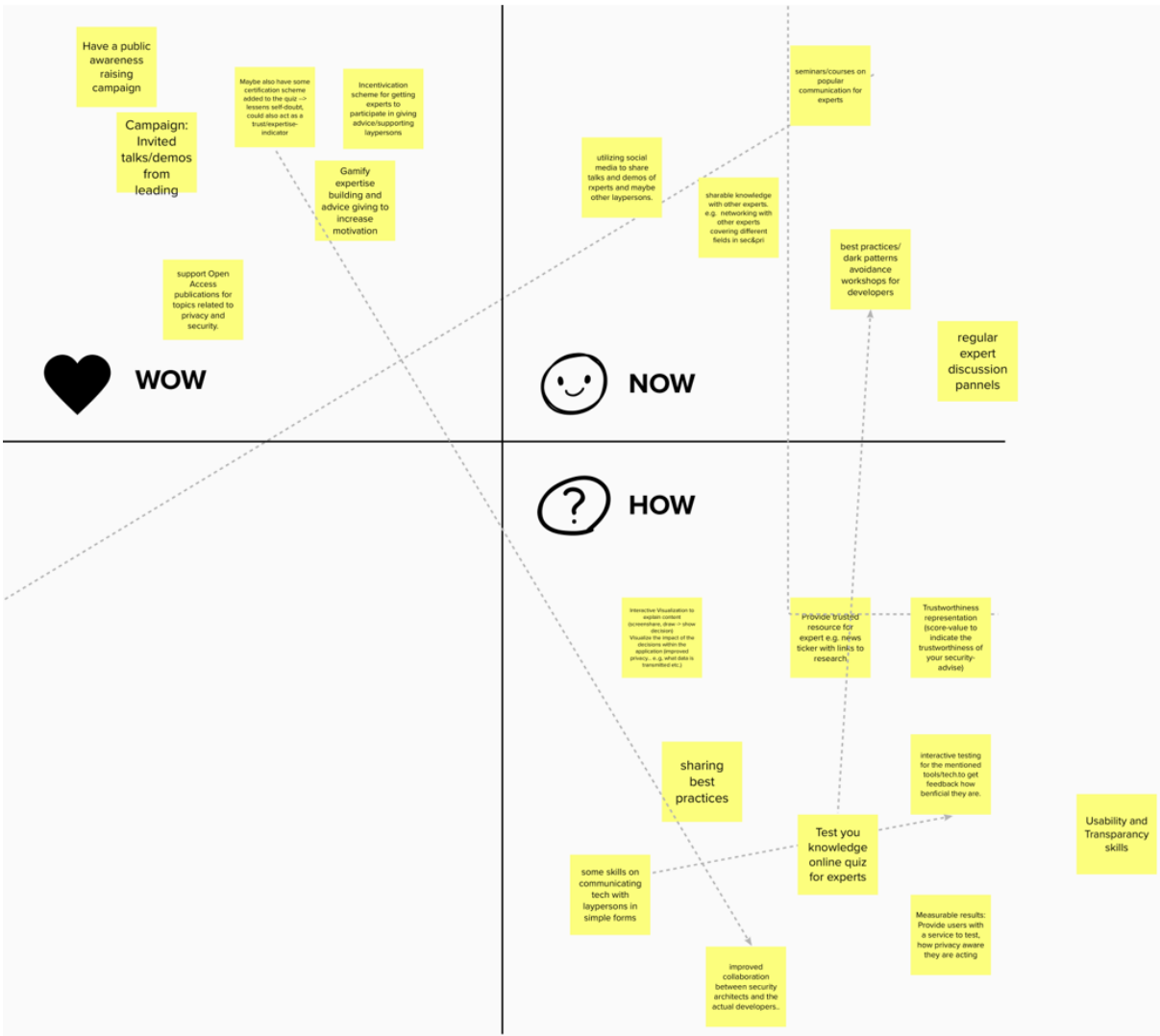


Figure 2: Results of the how-now-wow matrix collected on the Mural board in Workshop 2.