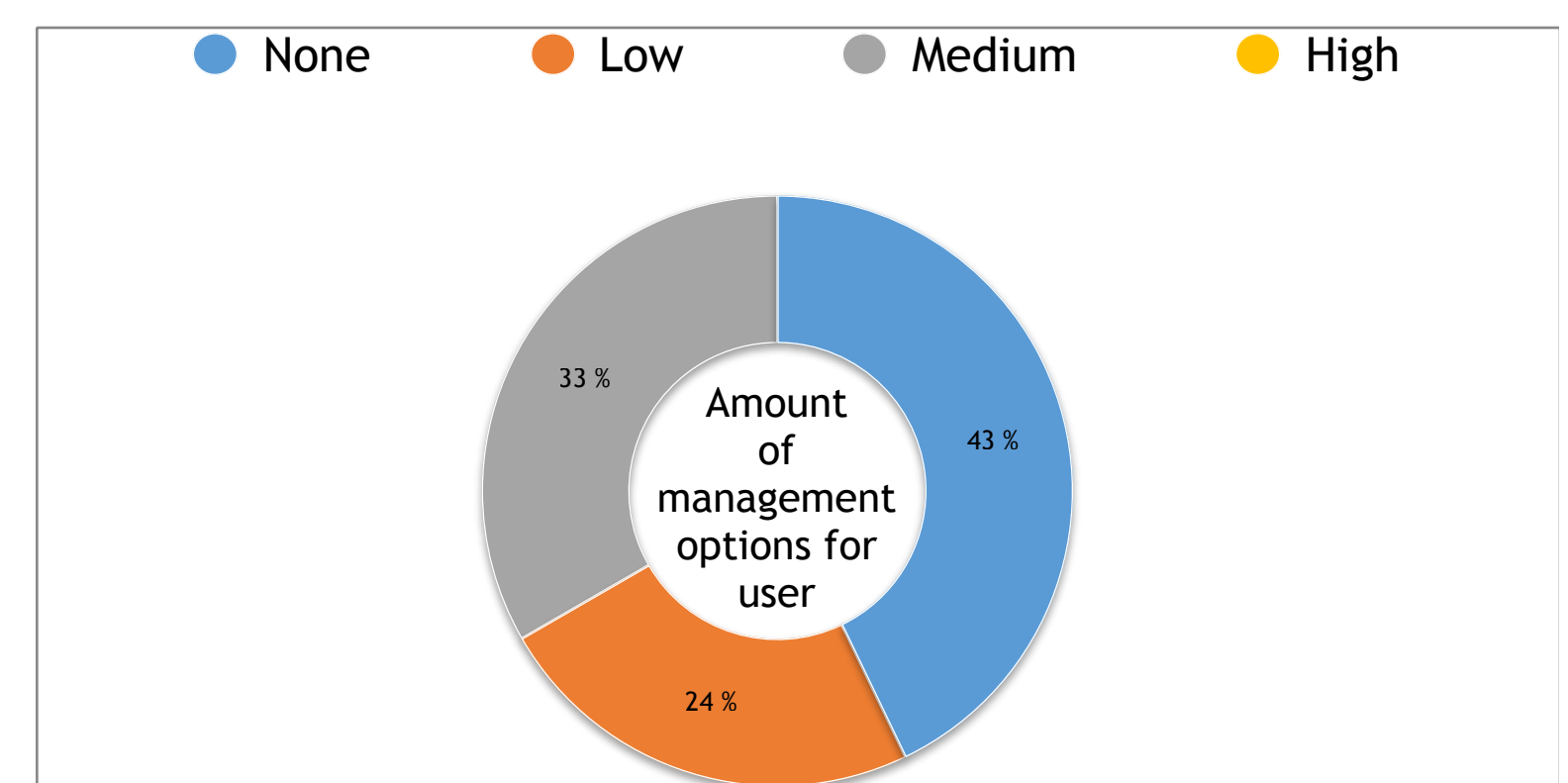
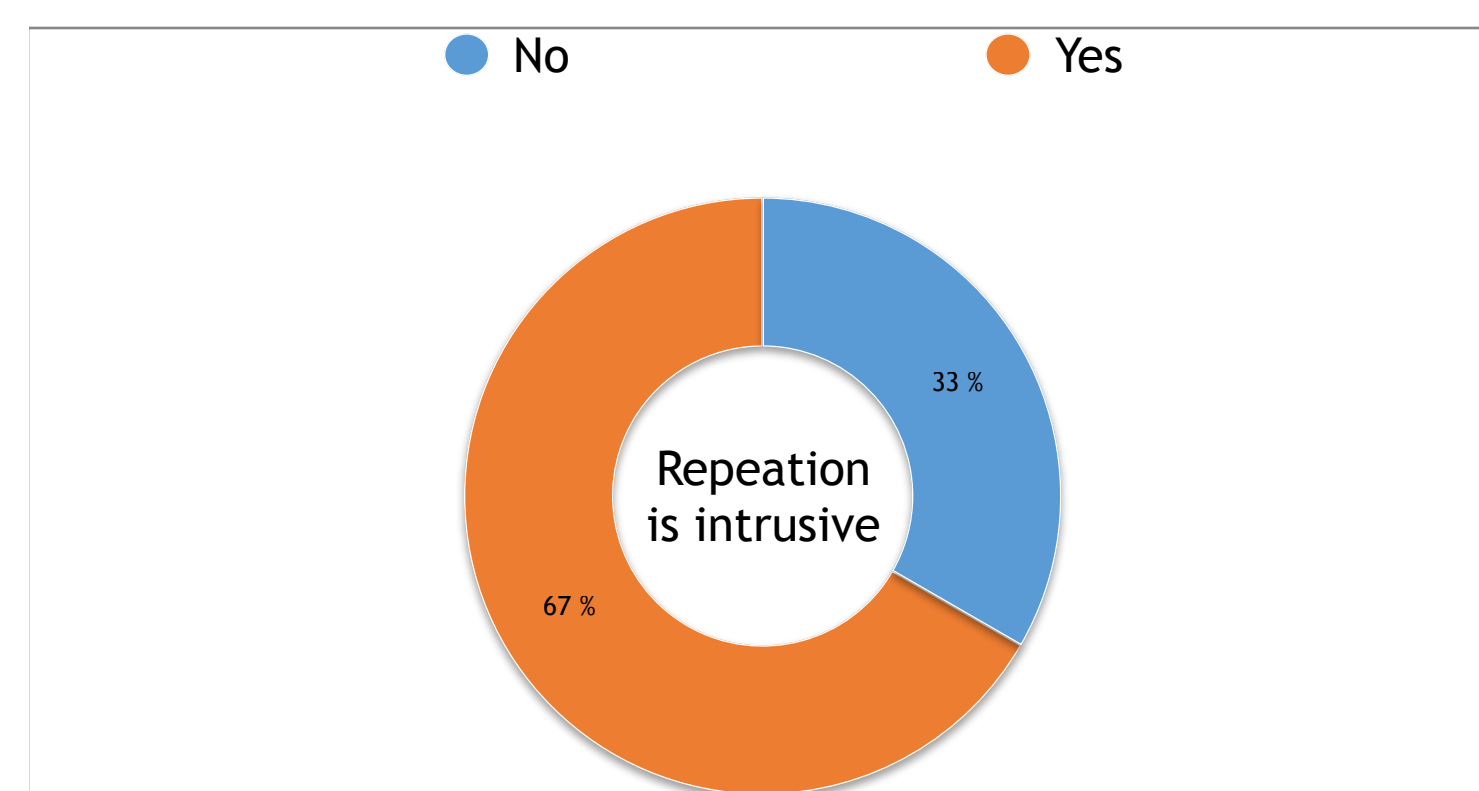
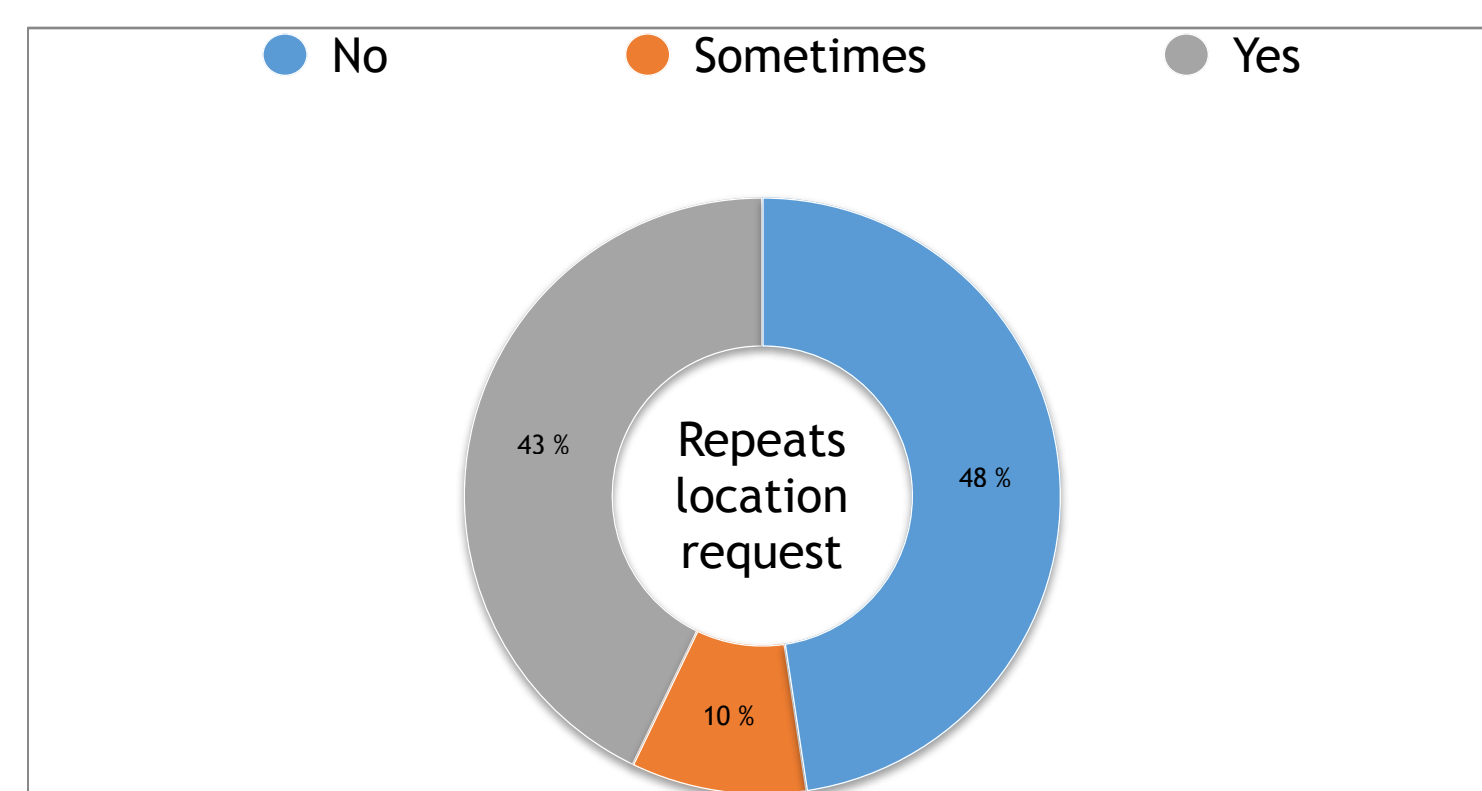
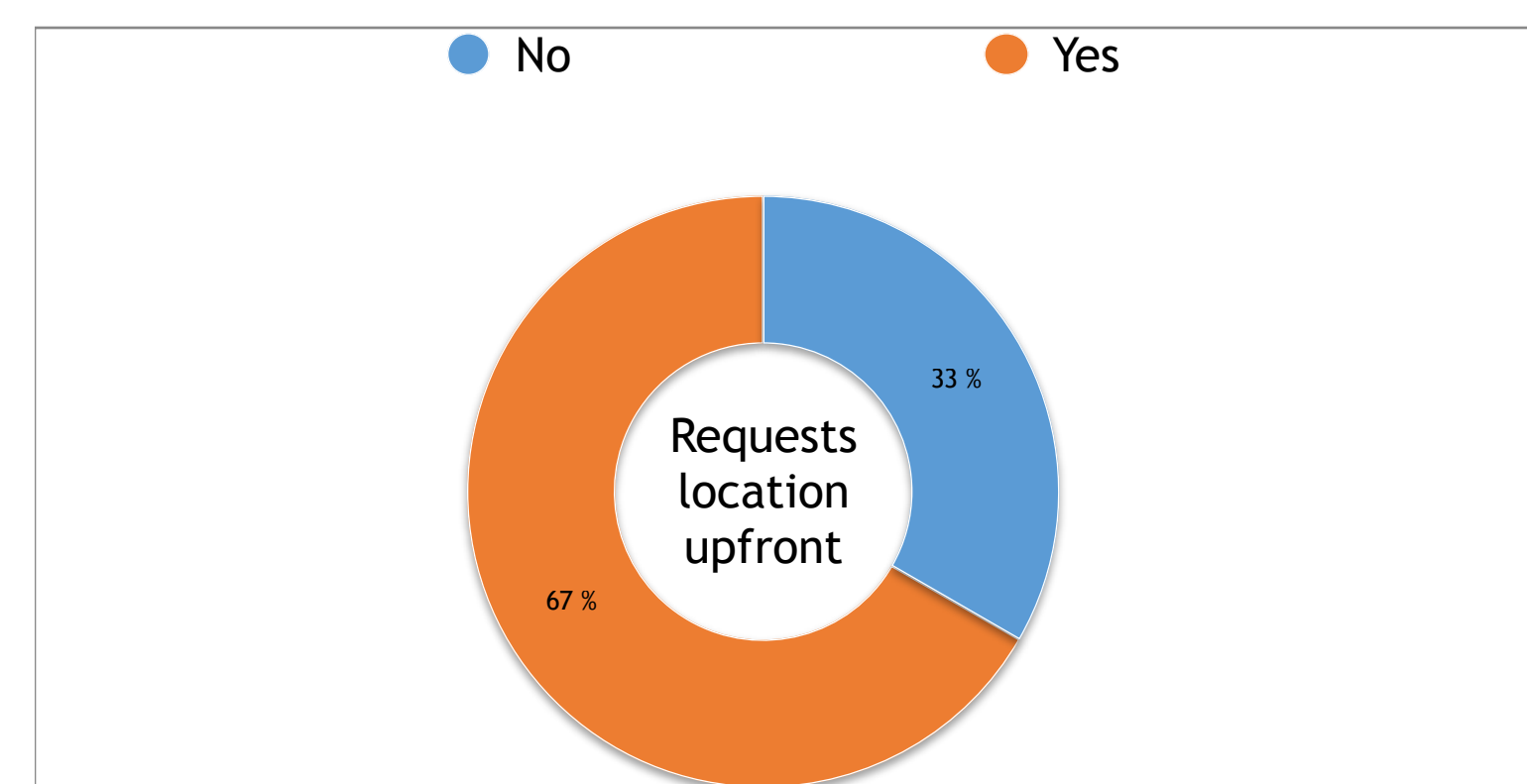
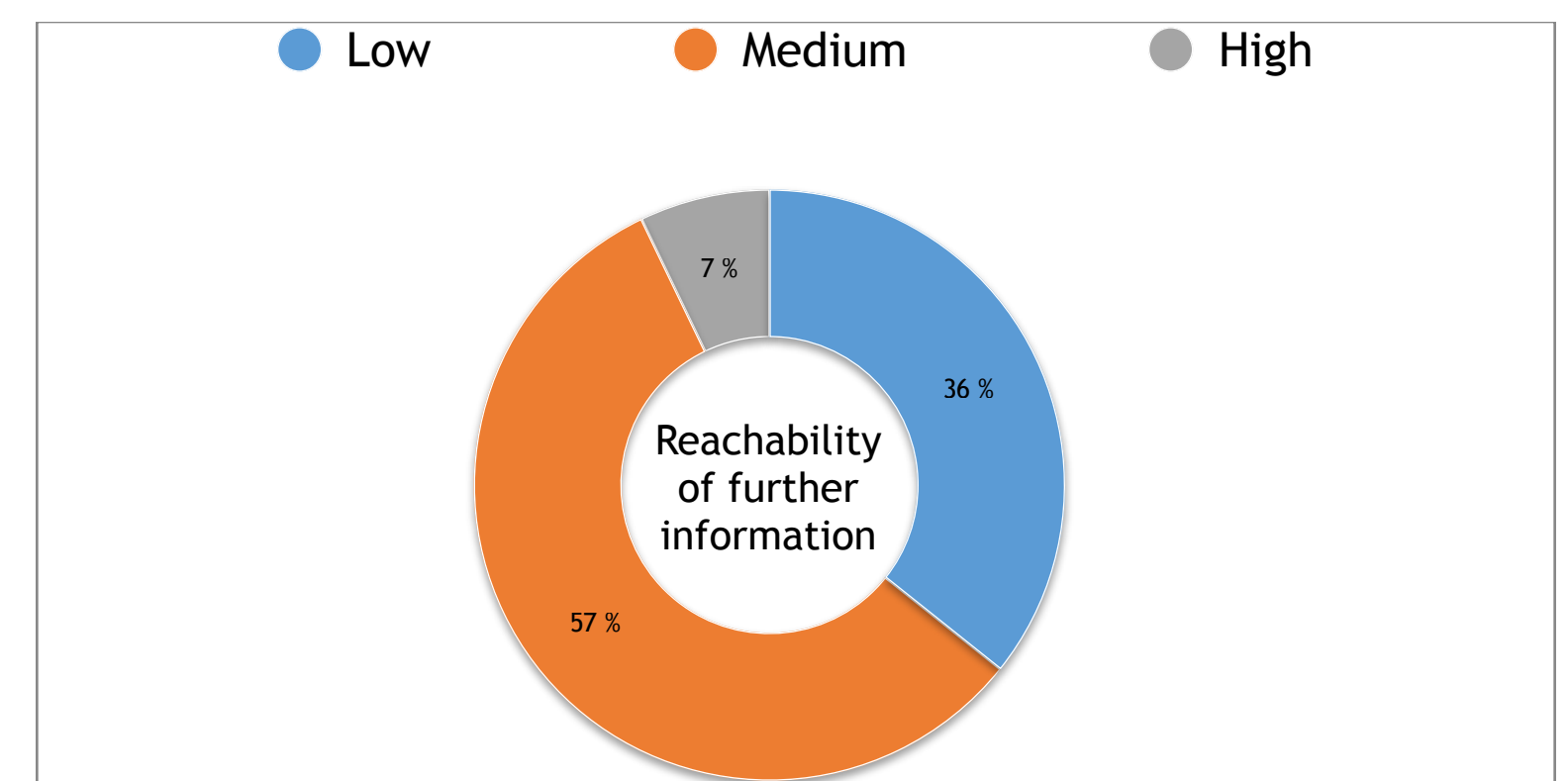
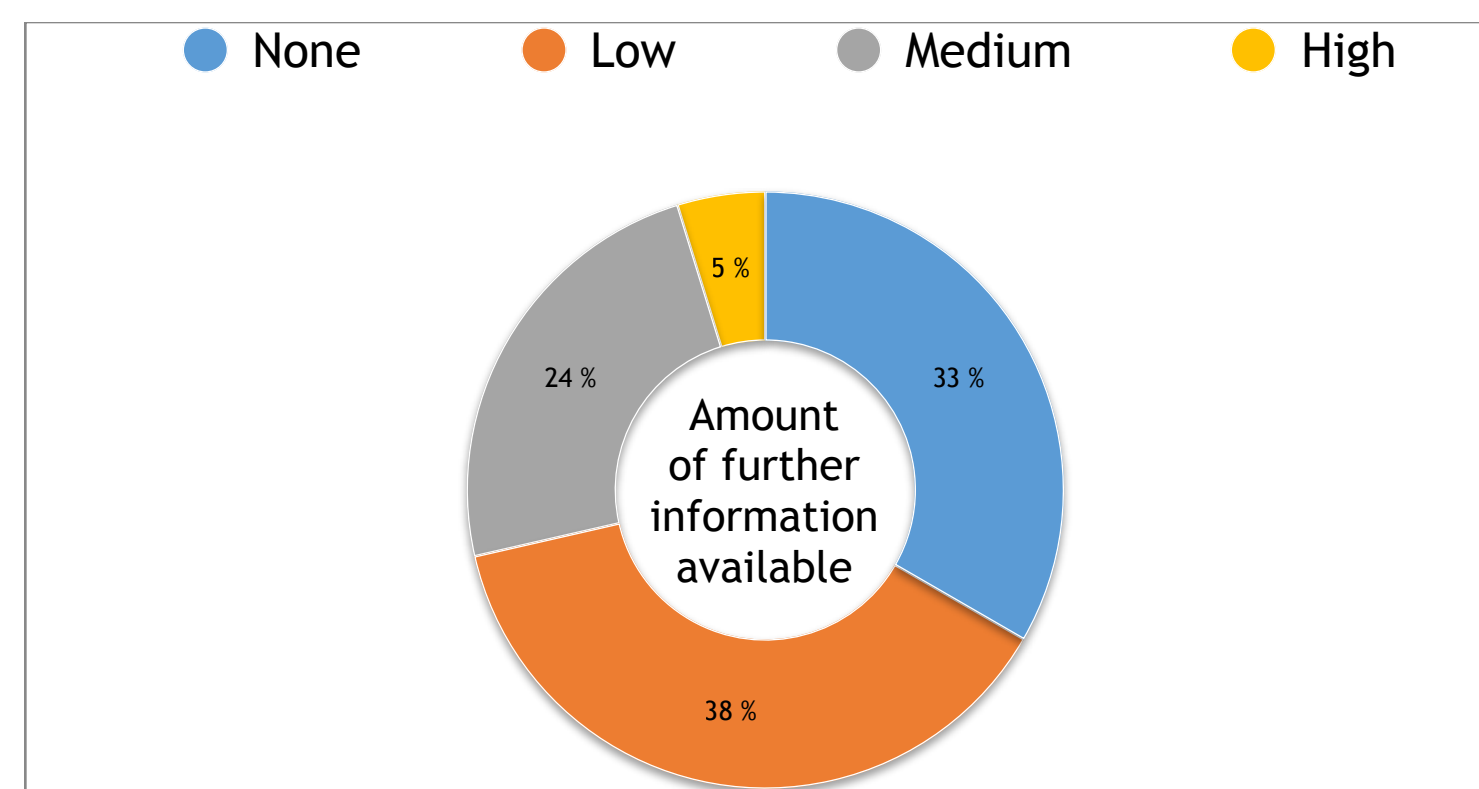
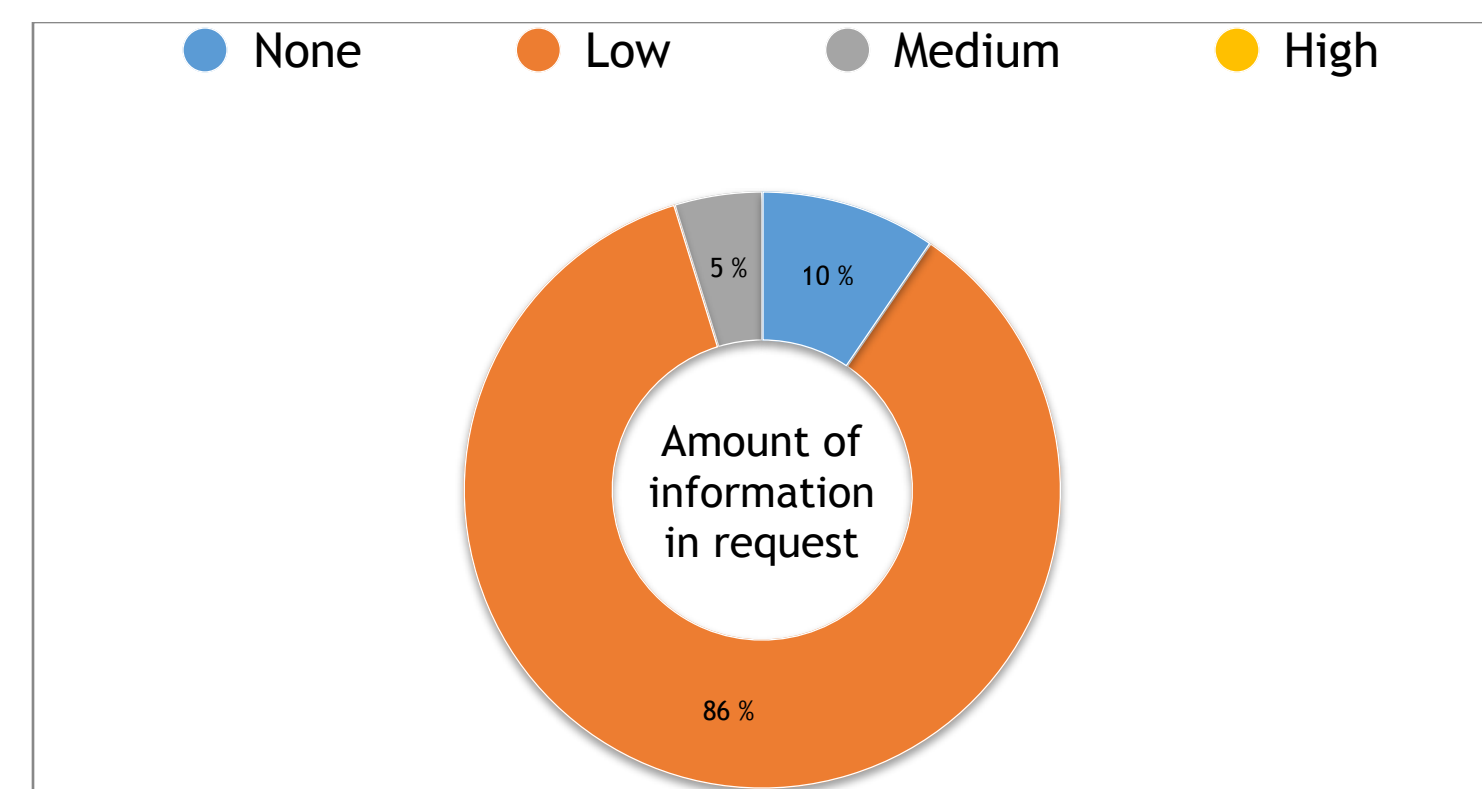
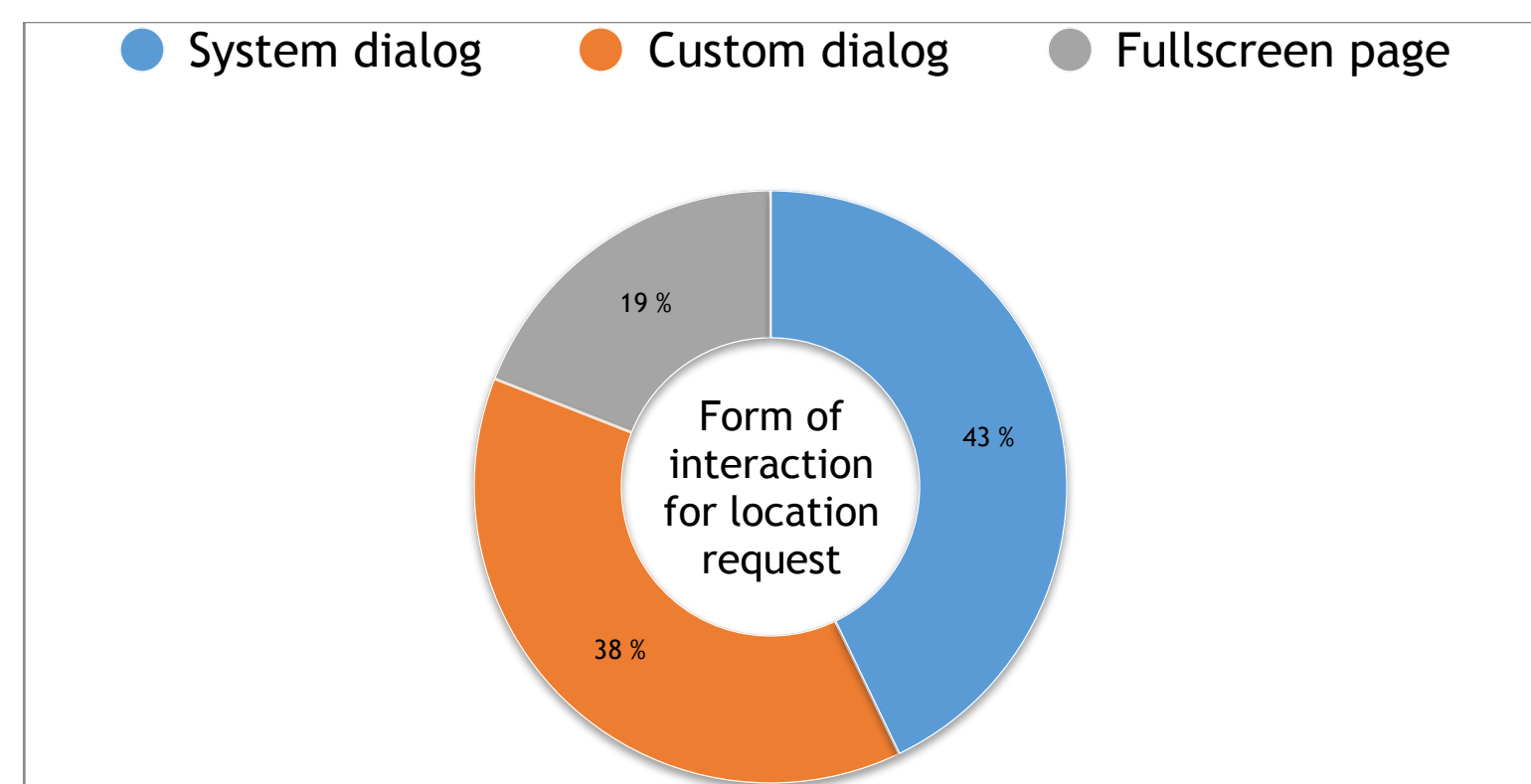
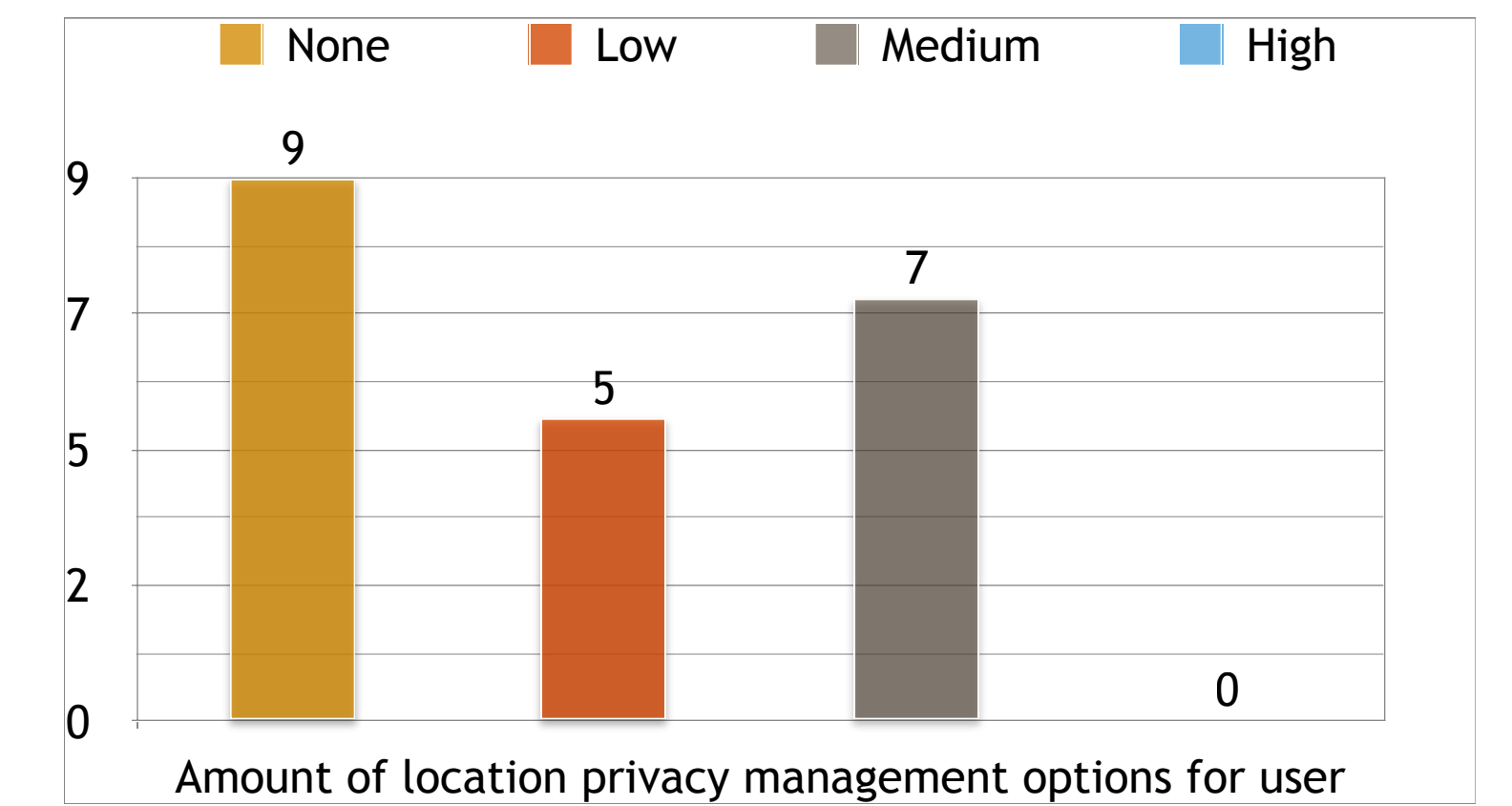
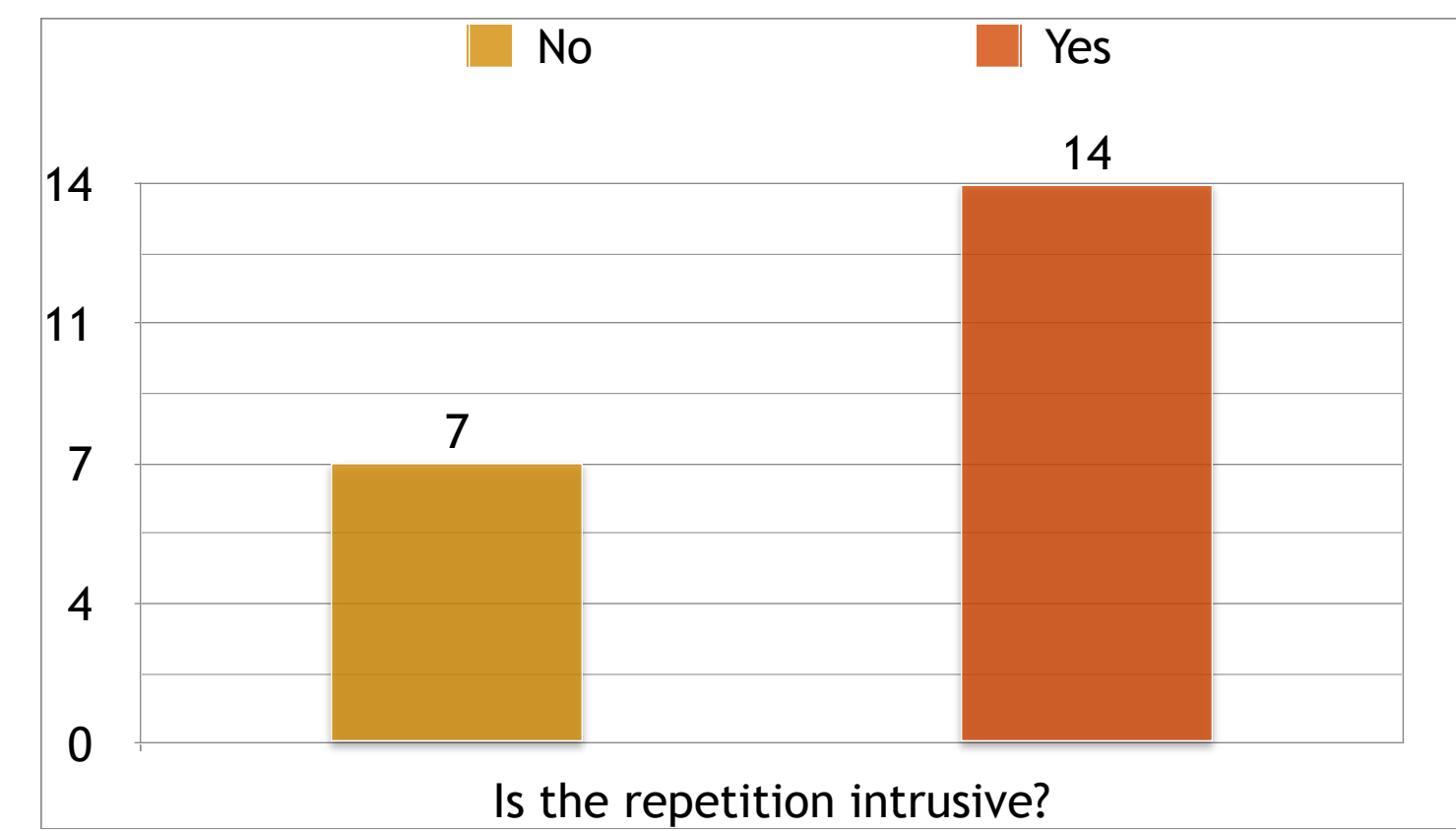
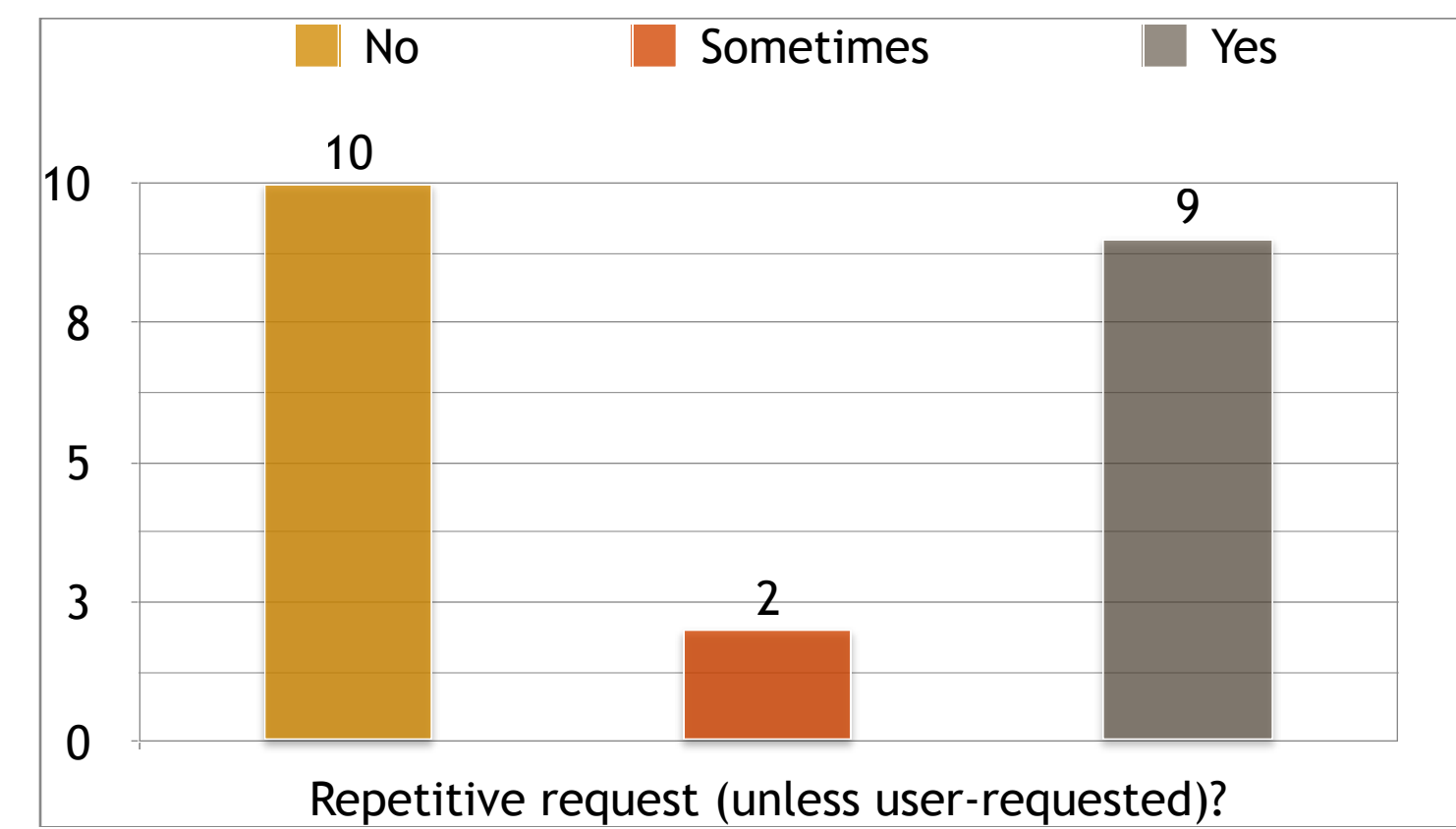
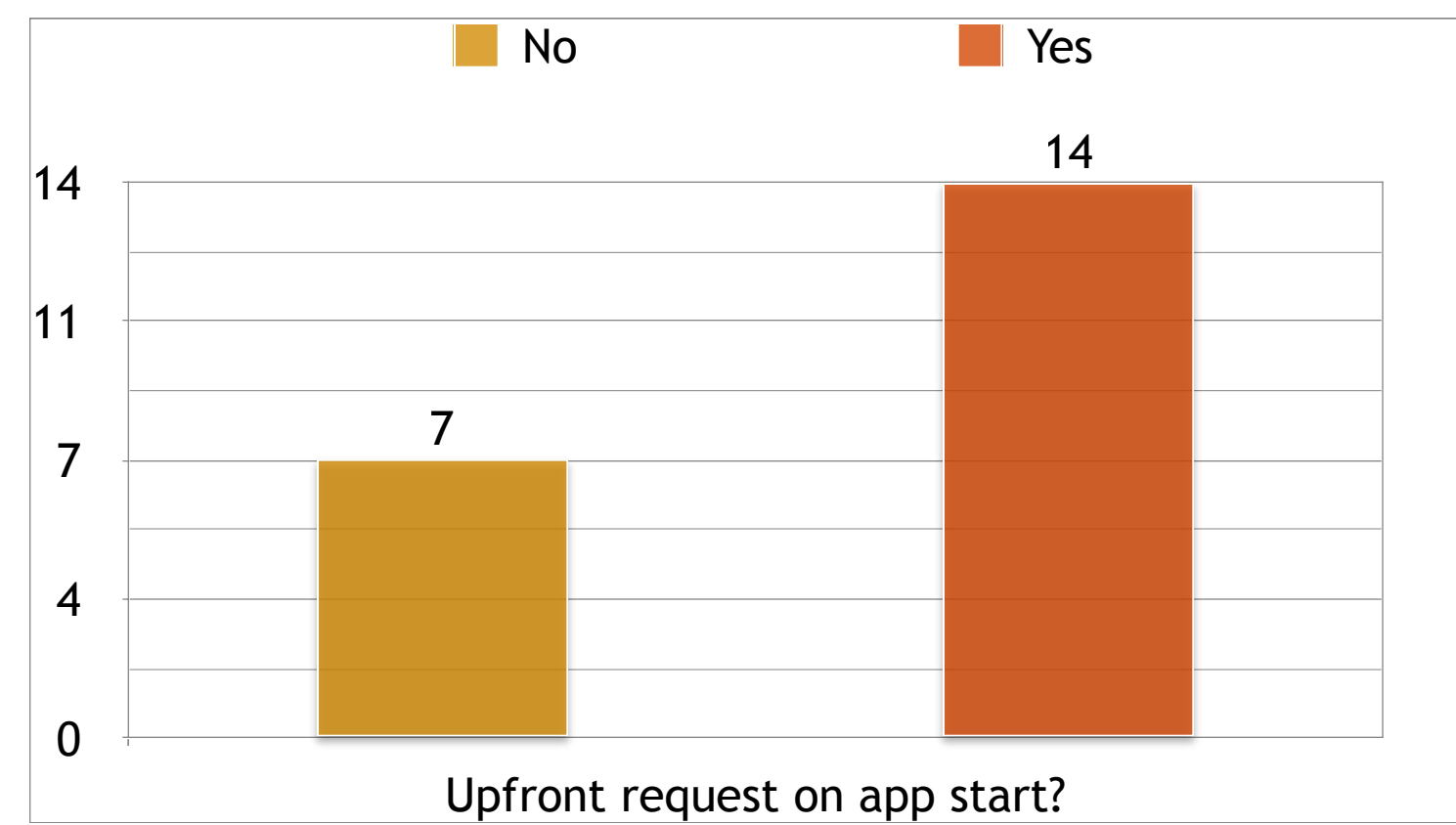
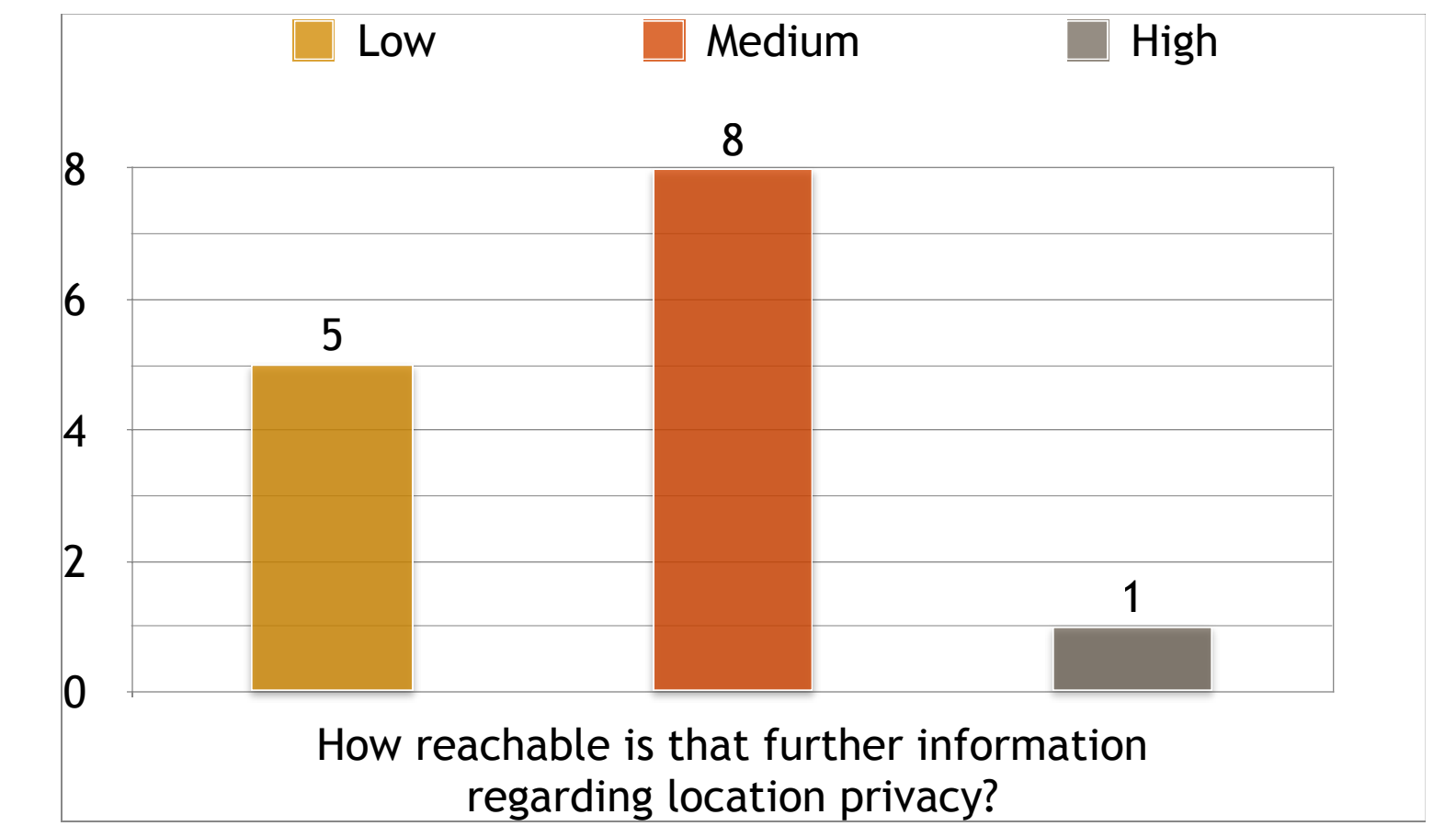
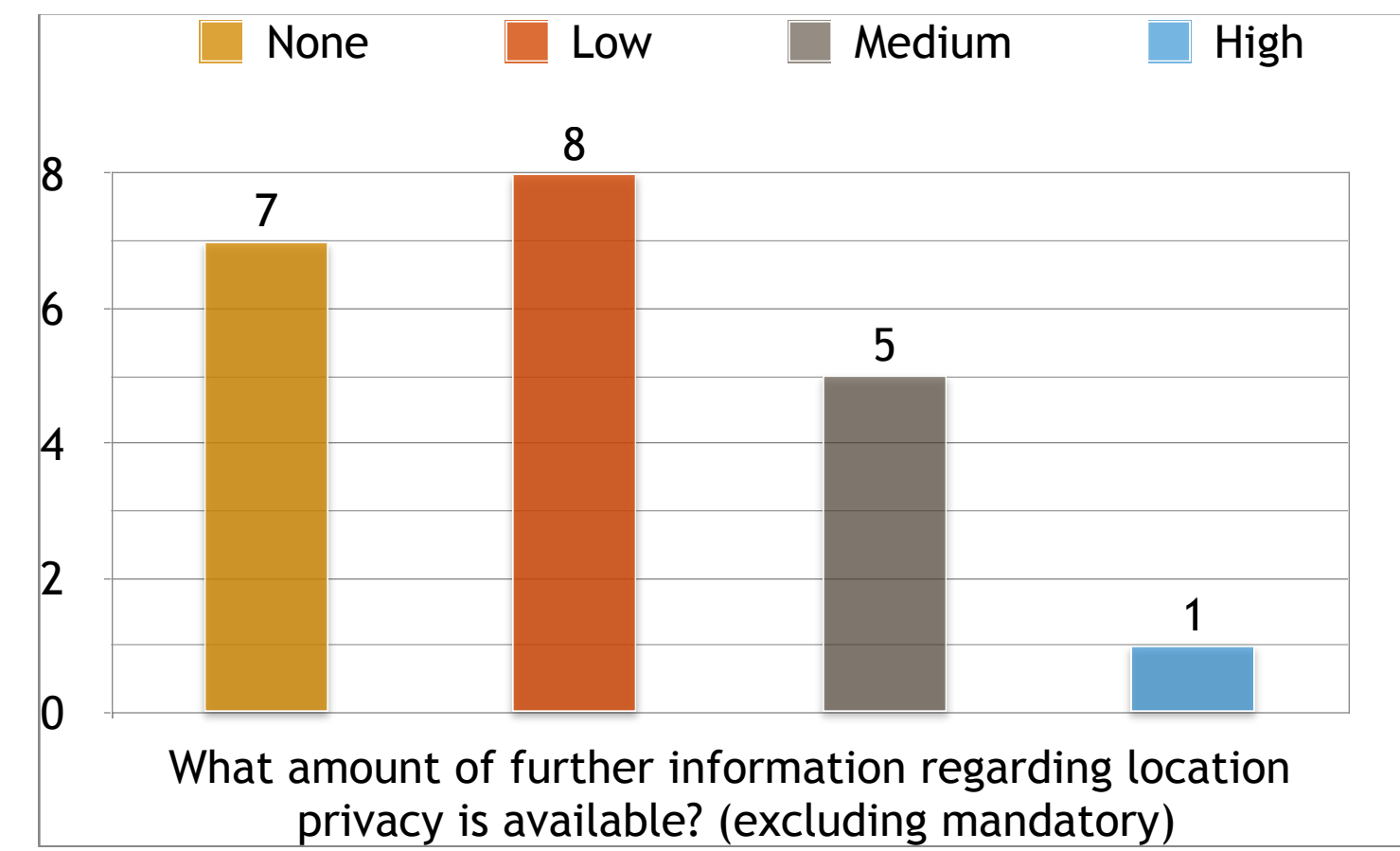
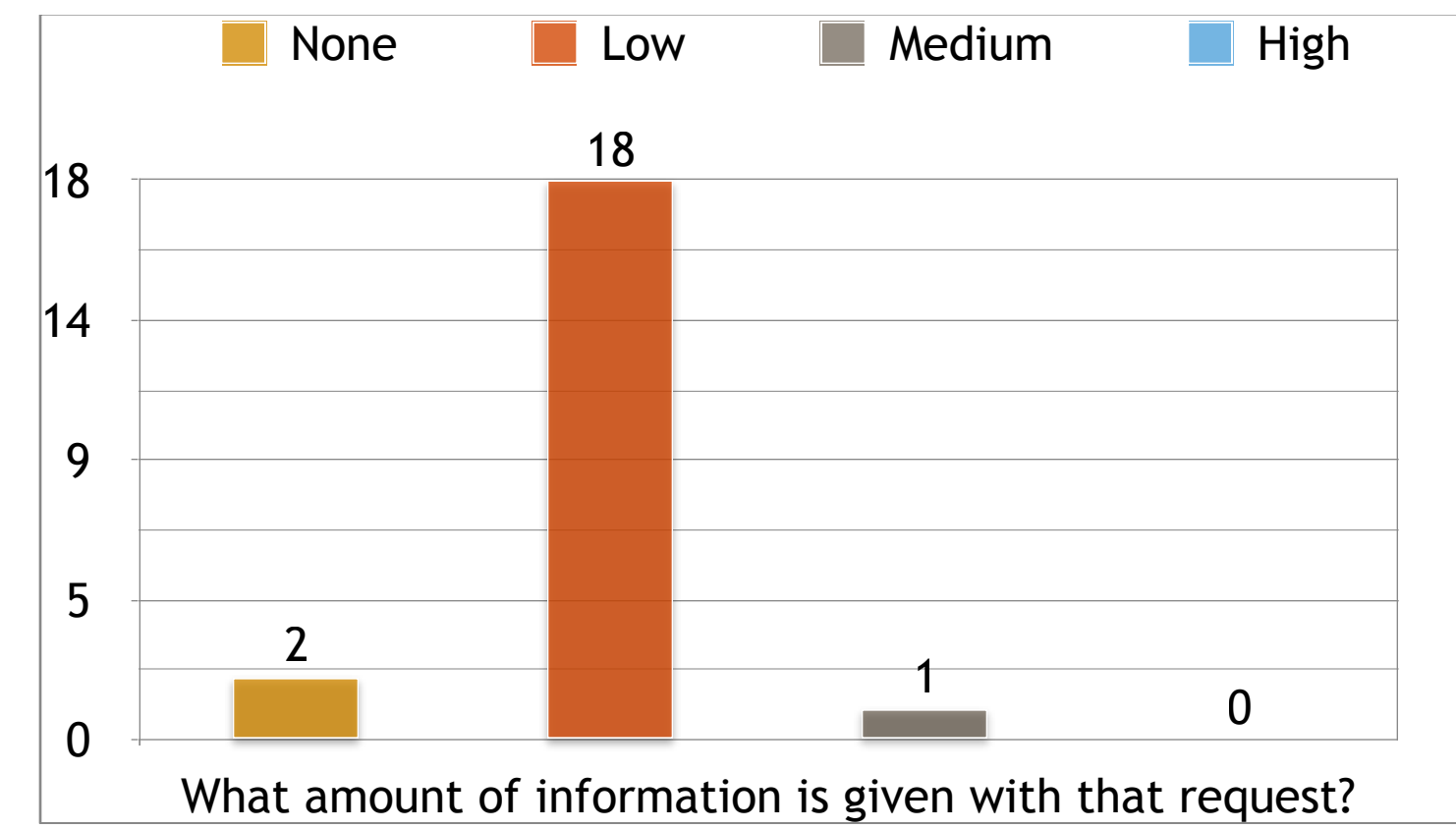
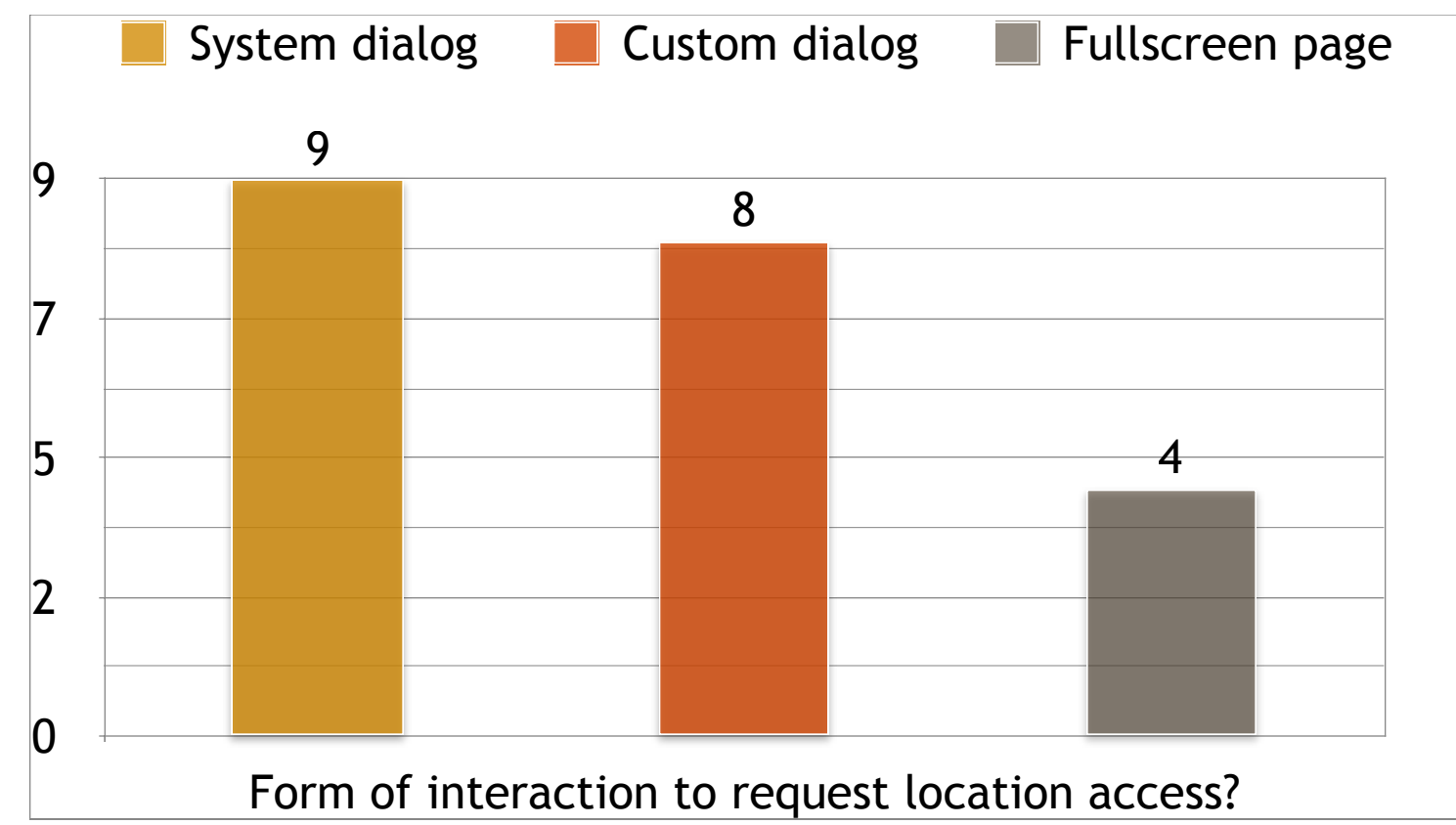


Analysis - status quo of location privacy and consent in apps (visualization)



Analysis - status quo of location privacy and consent in apps (data)

Category	App	App use case	Form of interaction to request location access?	What amount of information is given with that request?	What amount of further information regarding location privacy is available? (excluding mandatory)	How reachable is that further information regarding location privacy?	Upfront request on app start?	Repetitive request (unless user-requested)?	Is the repetition intrusive?	Amount of location privacy management options for user
Maps / Navigation	Google Maps	Navigation with various vehicles	Custom dialog	None	High	High	Yes	No	-	Medium
	Apple Maps	Navigation with various vehicles	System dialog	Low	None	-	Yes	Yes	No	None
	Komoot	Navigation for hiking and cycling	Fullscreen page	Low	Medium	Medium	Yes	Yes	Yes	Medium
Tracking	Strava	Fitness tracker for various kind of sports	Custom dialog	Low	Medium	Medium	Yes	No	-	Medium
	adidas Running	Fitness tracker for various kind of sports	Fullscreen page	Low	Low	Medium	Yes	Yes	Yes	Medium
	Pacer	Step counting and daily walking tracker app	Custom dialog	Low	Medium	Low	Yes	No	-	Medium
Services	Uber	Taxi-like driving service	Fullscreen page	Low	Medium	Low	Yes	Yes	No	Low
	booking.com	Travel app for worldwide accommodations	Custom dialog	Low	None	-	No	Sometimes	Yes	Low
	wetter.com	Weather forecast and insights	Fullscreen page	Medium	Low	Low	Yes	Yes	Yes	Medium
Social Media	Twitter	Social network focused on short messaging	Custom dialog	Low	Low	Medium	No	No	-	Low
	Instagram	Social network focused on media	Custom dialog	Low	Low	Medium	No	No	-	None
	Facebook	Social network	Custom dialog	Low	Medium	Medium	No	No	-	Medium
	Jodel	Location based social media network	System dialog	Low	Low	Low	Yes	Yes	Yes	Low
Messaging	Telegram	Instant messaging service with privacy focus	System dialog	Low	None	-	No	No	-	None
	Signal	Open source instant messaging service with privacy focus	System dialog	Low	None	-	No	No	-	None
Shops / Retail	Ikea	Furniture and home accessories store	System dialog	None	Low	Medium	No	No	-	None
	lieferando	Food ordering app	System dialog	Low	None	-	Yes	Yes	No	None
	Shpock	Marketplace for selling/buying goods	System dialog	Low	Low	Medium	Yes	Yes	No	Low
Productivity	Evernote	Notes organizer	System dialog	Low	Low	Low	Yes	No	-	None
	Apple Reminders	Reminders app (built into iOS)	System dialog	Low	None	-	Yes	Sometimes	Yes	None
Games	Pokemon Go	Location based game	Custom dialog	Low	None	-	Yes	Yes	Yes	None
Legend										
			How is location access request?	What amount of information is given with that request?	What amount of further information regarding location privacy is available? (excluding mandatory)	How reachable is that further information regarding location privacy?	Upfront request on app start?	Repetitive request (unless user-requested)?	Is the repetition intrusive?	Amount of privacy management options for user
Notes: Platform: iOS 14.0.1 Date: October 19th 2020			System dialog: - location access request is limited to the default iOS dialog (- this dialog is mandatory and will appear on every app, that request location access, however some apps use custom view before that) Custom dialog: - custom dialog view, that sometimes (but not always) gives extra information, why location access is needed Fullscreen page: - a fullscreen intrusive view, that blocks all other content behind - often (not always) gives additional information, why location access is needed	None: - no information given Low: - very brief information - mostly one short sentence, that gives very top-level reasoning, why location access is needed Medium: - brief explanation how and why location data is used - possibly multiple sentences - possibly contains a direct link to further information High: - very detailed and comprehensive information - educates the user how and why her location data is used - access to further information if wanted	None: - no information given besides mandatory information required by law Low: - very brief information, a few sentences at most - on an abstract level Medium: - more detailed information how and/or why location data is used - partly supported through graphical explanation High: - detailed and comprehensive information on how/why location data is used - access to further and more detailed information possibly available	Low: - information is hidden in several sub-menus and hard to find - in some cases a manual search is necessary Medium: - information is reachable, however it is not an entirely obvious navigation-path High: - information is highly reachable and accessible through obvious and transparent navigation patterns	Is the location access request by the app made upfront on the first app start or rather delayed to the point, where location data is actually needed?	Is the location access request repeating (e.g. in every startup of the app), until users consent is given? (excludes specifically requested usage of location through the user herself) No: - no repetition Sometimes: - repetition is shown on an irregular basis - e.g. just once or every X startup Yes: - repetition is shown on a regular basis - e.g. on every startup	Intrusive means, that the user is unable to use the apps functions without answering the location access request (regardless of the actual decision the user makes). For example using a fullscreen page or a dialog is intrusive, because the user needs to take action before she can continue.	None - no options available Low: - Very few options for the user, that she can use to control her location data usage - often limited to very few account privacy options in general Medium: - more broad and fine-granular options - e.g. user is able to limit the (location) data to specific usages (e.g. only functional, no analysis or ads) - privacy options to limit other users from accessing her information High: - the user has a broad toolset of options to control her (location) data usages - user is in full charge of her (location) data and what happens to them

Form of interaction to request location access?		What amount of information is given with that request?		What amount of further information regarding location privacy is available? (excluding mandatory)		How reachable is that further information regarding location privacy?	
System dialog	9	None	2	None	7	Low	5
Custom dialog	8	Low	18	Low	8	Medium	8
Fullscreen page	4	Medium	1	Medium	5	High	1
		High	0	High	1		
Upfront request on app start?		Repetitive request (unless user-requested)?		Is the repetition intrusive?		Amount of location privacy management options for user	
No	7	No	10	No	4	None	9
Yes	14	Sometimes	2	Yes	7	Low	5
		Yes	9			Medium	7
						High	0