Ref. Ares(2018)4467437 - 30/08/2018





D1.2 Families_Share mobile-based services definition

WP1 – Conceptual framework for users' engagement, needs' analysis, behavior analysis strategy and co-design

30.08.2018





Disclaimer

Any dissemination of results reflects only the author's view and the European Commission is not responsible for any use that may be made of the information it contains.

Copyright message

© Families_Share, 2018

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. Reproduction is authorised provided the source is acknowledged.





Document Information

Grant Agreement Number	780783	Acronym	FAMILIES_	SHARE
Full Title	Families_Share m	obile-based ser	rvices definitio	n
Торіс	H2020 CAPS Topic	:: ICT1120	17	
Funding scheme	IA Innovation Act	ion		
Start Date	1/1/2018	Duratio	on	34 months
Project URL	www.families-sha	ire.eu		
EU Project Officer	Loretta Anania			
Project Coordinator	Agostino Cortesi,	UNIVE		
Deliverable	D1.2: Families_Sh	are mobile-bas	ed services de	finition
Work Package	WP1 Conceptual	framework for	or users' enga	agement, needs' analysis,
	behavior analysis	strategy and co	o-design	
Date of Delivery	Contractual	M8	Actual	31/08/2018
Nature	R – Report	Dissem	ination Level	P - Public
Lead Beneficiary	UNIVE			
Responsible Author	Chiara Leonardi	E	mail	cleonardi@fbk.eu
	FBK	Р	hone	+39 347 4414010
Contributor(s):	All partners			
Keywords	Co-design, user n	eeds, requirem	ents	

Document History

Version	Issue Date	Stage	Changes	Contributor
1.0	27th July 2018	Draft	Release of the first draft. Feedback on ToC.	FBK, all partners
1.1	2nd August 2018	Draft	Release of the second draft to all partners for comments and contributions (1st level check)	FBK, Imec, De Stuyverij
1.2	14th August 2018	Draft	Release of the third draft version to all partners for comments (2nd level check)	All Partners
1.3	23rd August 2018	Draft	Release of the fourth draft for final check	FBK, Smart Venice
2.0	28th August 2018	Final	Release of the final version	FBK, Imec





Executive Summary

This document reports on the activities conducted in WP1 as part of Task 1.3 ("Definition of the Families_Share online and onsite services through co-design") related to the design of the Families_Share platform and mobile-based services. In particular, inputs provided by stakeholders and local communities' needs emerged through the co-design approach - described in D1.1 - have been synchronized and worked out to provide a concrete input for mobile-based services design and implementation to be conducted in WP2. This deliverable provides:

- an analysis of existing digital applications for childcare management and group time scheduling;
- a description of three usage scenarios related to the three main types of childcare activities that have been identified starting from inputs collected in T1.2. and T1.3, namely *regular childcare*, *flexible childcare* and *last minute childcare*;
- the results of a collaborative exercise performed by the project partners of the Cokido application, in order to get a general overview and a first-hand experience of a collaborative process for shared childcare through a digital service;
- the elaboration of a task flow maps, starting from the refinement of user needs and platform functionalities elaborated in during the international meeting in Limassol (Cyprus) in June 2018;
- the refinement and prioritization of user requirements and the related visual wireframes, including indications for the UX (User experience) and UI (User interface) design as a result of the "design sprint" workshop conducted in Venice in July 2018.
- the overall documentation describing the visual identity, high-fidelity wireframes and the interaction flow that will guide the development of the first release of the Families_Share platform, as part of WP2. Mockups, wireframes and interactive prototypes of the Families_Share platform have been elaborated to detail and showcase the features and the interaction that should be supported within the application. This documentation provides a basis of communication and source of clarification that will guide the platform and mobile services development in WP2.





Table of Content

1. Introduction	7
1.1. Intended audience	9
1.2. Document structure	9
2. Analysis of existing digital platforms and applications	10
2.1. Collaborative platforms and applications	10
2.1.1. Peerby	10
2.1.2. ShareTribe	11
2.1.3. Yoopies	12
2.1.4. Bsit	12
2.1.5. PARC	13
2.1.6. Cokido	14
2.2. Digital applications for group coordination and group time-management	15
2.2.1. Google Calendar	16
2.2.2. Doodle	17
2.2.3. Monday	17
3. Scenario and usage domain consolidation	18
3.1. Classification of childcare activities and scenarios description	19
3.1.1. Regular (routinely) childcare activities	19
3.1.2. Flexible (seasonal) childcare activities	20
3.1.3. Contingency management (last minute childcare)	24
3.2. Cokido experience	24
4. Needs refinement and task flow definition	26
4.1. Features, functionalities and pending issues	27
4.1.1. Community configuration and setup	27
4.1.2. Registration	27
4.1.3. User and children profile	28
4.1.4. Groups creation and management	28
4.1.5. Users roles	29





	4.1.6. Activity creation and management	30
	4.1.7. Calendar	31
	4.2. Privacy compliance needs	31
	4.2.1. Registered users	31
	4.2.2. Non-registered users	32
	4.3. User journey refinement and task flow representation	32
5. (UX and UI design	33
	5.1. Venice design sprint workshop	34
	5.2. Results	35
	5.2.1. Requirements list, features revisions and updates	35
	5.2.2. Preliminary sketches and wireframes	36
6. I	Design specification	39
	6.1. Visual identity	39
	6.2. Consolidated wireframes	42
	6.2.1. Registration, user profile and privacy	42
	6.2.2. Creating and managing groups	47
	6.2.3. Creating and managing activities	53
	6.2.4. Time and availability management and scheduling	56
	6.3. Interactive prototype and design specifications	59
7. (Conclusions	62
An	nex	64
	Annex 1. Scenarios presentation	64
	Annex 2. Cokido experience material	66
	Annex 3. Full requirement list	70
	Annex 4. Wireframes and material used in the design sprint workshop	77
	Annex 5. Color palette proposals and survey results	79
	Annex 6. Mobile application wireframes	81





1. Introduction

The design of an innovative collaborative platform and of mobile-based services to support parents in organizing collaborative childcare has a central role in the Families_Share project. As part of WP1, activities conducted in Task 1.3 - in strong synergy with activities done in Task 1.2 - had the main goal to provide a concrete input for the first release of the platform and mobile-based services design and implementation.

Following the co-design process conducted in the CityLabs, described in D1.1., this document depicts the activities conducted to define the requirements and service functionalities to be implemented in the first release of the Families_Share platform. Use cases, wireframes and interactive prototypes have been elaborated to guide the development process of services to be conducted in WP2 "Platform Development".



Figure 1: WP1 tasks and their connection with WP2 and WP3

The needs analysis described in D1.1 has taken place in the 6 EU cities where participatory needs analysis, co-design and co-creation processes were set up (WP1). These activities lead to the development of the first Families_Share Platform prototype (WP2) which will trigger socially innovative models for socialising childcare in urban neighbourhoods (WP3).

The Families_Share methodology is grounded on a perspective of innovation as the the result of a coproduction of different local stakeholders and communities involved in the project. As such, innovation is the result of a continuous negotiation between the requirements emerging from citizens and community engagement and opportunities and constraints imposed by the iterative approach that will be pursued, thanks to the re-use of an available ICT platform and the evaluation of how users will use and adapt the technology into their daily routines. In this perspective, technology is designed and shaped not only throughout the design process, but it is also reshaped through concrete and local use. Therefore, new





requirements will be derived by observing how technology is appropriated in real contexts of use —that is, how technology is refined and shaped to meet users' local and contextual needs. This focus on the appropriation process allows us to consider mutual adjustment between the technical side and the social side. These aspects are reflected in the fact that the co-design will continue in WP3 piloting activities by investigating scaffolding strategies for the citizens to "appropriate" the technology and to integrate it in their daily life (See Figure 2).



Figure 2. The iterative design lifecycle followed in Families_Share

The goals of the design activities carried out at months 6-8 of the project, as part of WP1, were the following:

- Analysis of existing applications. Advancing the benchmarking process started in D1.1, we further investigated technological platforms and digital services for supporting collaborative activities, group coordination and time-management.
- Elaboration of use cases and technology scenarios. Starting from input gathered in T1.2 and described in D.1.1 we elaborated usage scenarios to better showcase and define possible usage of the Families_Share platform in the different CityLabs.
- **Collaborative evaluation of the Cokido application.** Since Families_Share service is grounded on the Cokido platform, a systematic analysis of Cokido functionalities and interaction modalities was carried out for better define requirements and functionalities.
- Elaboration and definition of the design specifications. The present deliverable includes a description of the design specification for the development of the first release of the Families_Share platform. The specification includes a description of the visual identity of the platform, details of the graphical user interface and specifications of interaction patterns. The





document is accompanied by a number of wireframes, graphical mockups and interactive prototypes that showcase the design specifications. The specifications will serve to guide the implementation activities to be conducted in WP3.

1.1. Intended audience

This document targets Families_Share consortium members in order to progress on the finalization of the design and the implementation of the first release of the Families_Share platform. It also contributes to the overall dissemination of the activities and the results of the project.

1.2. Document structure

The document is organized as follows.

Section 2 presents a detailed analysis of relevant digital platforms and mobile applications for supporting collaborative activities, group coordination and shared time-management.

In **Section 3**, the main usage scenarios for Families_Share platform are described. These scenarios represent a reference point for the conceptualization of the service design. Moreover, the section describes a collaborative activity carried out by the project partners in order to get a first-hand experience on the use of the Cokido online application.

Section 4 introduces an organized list of the needs collected and elaborated from a project meeting in Limassol (Cyprus). The section describes a first list of functionalities that emerged from the co-design workshops at the different CityLabs and presents a task flow of the main activities that might be supported with the digital platform.

Section 5 presents the first elaboration of the design specifications as they were collaboratively developed during a second project meeting in Venice (Italy). This process led to the creation of a list of requirements to be used as reference for the platform development. Moreover, this section includes a first set of wireframes and low-fidelity prototypes on the main functionalities of the mobile application.

Finally, **Section 6** describes the document specifications, including suggestions for the visual identity, GUI (graphical user interface) appearance and interaction patterns. The specification includes also an organized user flow wireframe, detailing each section of the online platform.





2. Analysis of existing digital platforms and applications

As a first step for the design of the Families_Share platform, we refined the understanding of the advantages provided by existing collaborative platforms. Part of them have been described in D1.1 (Section 3.3) as the mapping exercise conducted as part of Task 1.1 actually provided a number of guidelines that could support the design of the platform. We further refined this analysis, taking into consideration platforms and services that, even if not related to childcare, could give us input for designing specific functionalities, such as time-management or groups management features. We first present in Section 2.1 a detailed analysis of collaborative platforms that includes features related to group management. Then, in Section 2.2, we present the analysis of digital tools that can support collaborative time and shifts managements supporting members of a group.

2.1. Collaborative platforms and applications

The benchmark analysis started with the review of popular mobile applications and collaborative platforms for sharing goods and services, including childcare activities. Most of these digital platforms include sharing economy platforms based on peer-to-peer exchanges. In the next subsection we report the output of the analysis of six platforms for sharing goods and services (*Peerby* and *ShareTribe*) and childcare activities (*Yoopies, Bsit, PARC* and *Cokido*).

2.1.1. Peerby









2.1.2. ShareTribe



Website: www.sharetribe.com

Screenshots (web app)



Useful features: The platform guides the user in a step-by-step process for creating a peer-to-peer marketplace. The ShareTribe platform supports customization and personalization of the marketplace, allowing users to input all relevant information (including description, location, images) and to preview the result. These features can inform the design of the Families_Share platform interface for the community managers, supporting them in setting up and personalize the online community.





2.1.3. Yoopies

Yoopies	Description: Founded in France in 202 activities taking advantage members and work collect childcare were added, succeaning services, etc. You countries - being Italy, Sy Austria, Portugal and the a website. An application countries.	12, Yoopies is a platform for su ge of the network of friends, ac eagues. In 2014 additional servi uch as: tutoring activities, hom popies is currently activated in a pain, Germany, Belgium, Switze e United Kingdom - and in each n for mobile phones is only ava	pporting childcare equaintances, family ces in the field of e care, pet-sitting, other nine European erland, the Netherlands, of them it is available via ilable in selected
Website: www.yoopie	s.com		
Screenshots (web app)		
	<i>I</i> 7 ≅ ♥ □ ● ≝ ♥ S	5 ✿ ● ○ i ← + C ■ Secure https://yoppies.co.uk/ingistration/parent unerum	~ / / 스 ♥ 및 ● 변 ♥ 당 ☆ ● 0 :
Wwhat all	elcome to Yoopies, te you looking for today?	Your Children Ext	Yes Care Yes can only wheth one type of care at a time.
	I sheety have an account	Marry Stars Stars a stars with water fundy	Q

Useful features: Yoopies focuses on childcare activities but also includes also supports for tutoring, housekeeping, senior care and pet sitting. Considering childcare, the platform helps users in finding profiles for different needs. The system guides parents in finding a babysitter by providing information for their childcare needs. This includes different options of care: occasional, part-time / after-school, full-time, nanny share and childminder. Babysitters and childcare professionals can post their ads in the platform.

2.1.4. Bsit



Description:

Bsit (formerly airBsit) is a mobile application available in France, Belgium, Luxembourg and The Netherlands. The service was launched in Belgium and it basically allows parents to connect with trusted babysitters. The service allows users (parents and babysitters) to manage invitations (receiving them or posting your services to potential clients), to check on your kids in real-time (by call or message), to rate babysitters, add them to a list of favourites, and to pay them.





	The platform w	vorks upon a commiss	ion-revenue model.	
Website: www.bsi	t.com			
Screenshots (mobi	ile app and promotic	onal material)		
Suggested Sitters My Sitters (a) My Sitters (a) My Sitters (a) My Sitters (b) My Sitters (c) My Sitters	12:30 □ ▼ ▲ 12:3 2 My Circles Find more recommended systems Join a Ciele of trust and find Sitters recommended ty the members of the Ciele. 3 School Circle Find Sitters recommended by penets from your school 2 Gens De Confiance communy. 2 Facebook friends: Account livited	Cards	Figure Figure	<section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header>
Useful features: The interesting feature the same need). The same need is	he platform allows as where you can "sha nev try to match fam	ssistive matching of barries of the second s	aby sitters and familie sysitting costs with oth ly quiz" (answering qu	es. Bsit has also an her families that have uestions about your

the same need). They try to match families based on a "family quiz" (answering questions about your parenting method). In the website, registered users can find graphical material that can be personalized for promoting your own profile on the app (<u>https://bsit.com/en/ambassadors/support-material</u>). Furthermore, Bsit offers a service dedicated to companies in order to make collaborators' life easier. The app can actually be co-branded with companies.

2.1.5. PARC









Useful features: PARC support parents in organising activities with children, allowing to invite other parents and children to these activities. Users can find activities organised by other parents (if they are public) and join them. Parents can also find child-friendly venues that are close by a location. Registered users can assign more than one children's profile to their accounts, link them with a second parent and with friends of the child(ren).

2.1.6. Cokido

∡cokido	Description: Cokido is a project of De Stuyverij that supports parents, grandparents, family and friends in organizing off-school childcare together. The project is based on the concept of "co-playing" and facilitates groups of parents in making arrangements to alternately take care of the children during holidays and/or after school. The "co-playing" process is supported by an online application (accessible from PC and mobile devices) that helps time-sharing and group management among members of the same groups. Within the application, parents can create or join groups, propose and contribute to child-care activities, and keep track of the group members' availabilities and needs.
Reference: www.cokic	do.org
Screenshots (web app)



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



(CORD)				Ξ.	0000					68 M		kenters 🗇 Periods 🖽 🕸	Settings 💦 🗮
	kido								Red Devels Message	es			
Kinderopuang, dat	doen we samen						() hell	ilof welcome t	o group Red Devils				
Wetcheme to the Cohldo appl The shart interdencing with heart heart the child provide applications. Write app (with applica- tion of the shart of the shart of the shart of the shart of the shart provide applications of the shart of the shart of the shart provide applications of the shart of the shart of the shart provide applications of the shart of the sh	s you the different functions of e ready, you can create your ou Cohido groups and request acces						Your Institut consta co-ope	r group has 1 year friends ar 1 a new childcar erative childcar	been created! nl other participants (p e period so you can sta e.	igo to "members : art with the orga	i invite") and rization of your		
									Red Deuils cre	nated	:		0
COKIDO					(Messages	8 M	embers			😤 Settings	≡
new period	× stop	participatu	19				08:00 - 12:30		P				
Summer activities	COMMENT no com cost € 0	s nents yet			Ø		Children V Toby Schiavo Michy Schiav	 0				delete edit tir	neslot
		BBSIT	††	ŤŤ			Adults						
	Mon 20 Aug	-	0	2	>		🗍 Gianluca Schi	ιίαυο				sque particin	ants
	Tue 21 Aug	-	0	2	>					-1:-6-			
	Wed 22 Aug	-	0	2	>	U	OCATION ADDRESS	s	genen	ut infor	mution		æ
	Thu 23 Aug	-	0	2	>		Primary Sch	hool So	aint Nicho	olas, Sai	int-Nicho	olas street 5, Ger	nt
	Fri 24					C	OSTS						C
			narticir	ants have	heen saua	d					_		
			puraci	ants nube	been sube	u							

Useful features: The Cokido online platform allows users to create or join groups and to manage activities. The platform integrates a section for organizing activities collaboratively. Parents can discover activities or propose new ones. They can also participate and sign their availabilities and needs in an interactive timetable. The platform displays also information such as the description of the activity, costs and the involvement of external babysitters. Through the interface, it is easy to assess whether an activity reached the required number of volunteers for different time slots.

2.2. Digital applications for group coordination and group time-management

The benchmark analysis included a review of popular mobile and web application for group coordination and time-management. These applications support users in scheduling meetings (*Google Calendar*), planning events collaboratively (*Doodle*) and managing time (*Monday*). These applications provide features, such as accessing shared calendars, scheduling and managing activities, tracking events and availabilities, that are highly relevant to the Families_Share mobile app.





2.2.1. Google Calendar

Goog	3 gle Ca	alenc	dar	De Ge de be	escrij pogle evelo edica e inte	e Cale ped I ted n grate	endar is by Goo nobile a ed with	the time-m gle and offer application. other Goog	anageme red as Go It allows le applica	nt and ogle ap to man itions s	schedu op both age eve such as	uling calendar service o on the web and on a ents, reminders and it can Gmail.
				[_ \	Web		Mobile				
Referer	ice: \	www	.cale	ndar	.goo	gle.c	om/cal	endar				
Screens	hots	s (mo	bile a	app)								
=	Feb	ruary			27	:	_		ll. ≋10	10:57	~	i[i중,aii 1800 10:59
s	м	т	w	T	F	s	=	July +	L	9 :	×	Theorem Streetly
1	2	3	4	5	6	7		August 2018				Territalia, National
8	9	10	11	12	13	14					V	
15	16	17	18	19	20	21		, <u> </u>			\bigcirc	Friday, 3 August 18:42 – 19:24
22	23	24	25	26	27	28	V				0	Verona Porta Nuova
27		_	_		H	/	1 Wed	12:00 - 13:00				1 guest
Fri	Kan 4 -	dinsky e 6 PM	xhibition		9	fre	0					Awaiting (1)
	Gug	igenheim	Museur	n ///		Pin	Z Thu	Birley Dorot	Birthday			
					-			10:00 - 12:00				·
	Mar	ch		P	G			Conf call 1 14:00 - 15:00	h enerdinent		=	Second Street,
	1	1	1			Ð	3 Fri	Trip \ 18:42 - 19:24 at	Name Alaste Internet Porte N	+	Going?	YES NO MAYBE

Useful features: Google Calendar includes many features for tracking and managing time events. For each event, users can include description, location and invite other people. The interface allows to view the events in a calendar using multiple view options: month, week, 3-day, day or schedule. The latter shows all the events in a long list, ordered by time. The application permits to manage multiple calendars. A calendar can be shared with selected people or make it public. Users can import events and calendars from external applications (e.g. MS Outlook or iCal), and export personal calendars in different formats. This application includes features that might be relevant for event scheduling in the Families_Share application, for example different views ("calendar" and "schedule" view) for visualizing time events, the steps for creating a new event, the interaction patterns that allow users to select time and dates.





2.2.2. Doodle Doodle **Description:** Doodle is an online calendar tool for time management and coordinating meetings. Through the app, users can propose dates and time slots while the platform enables other users to vote and add their availabilities. Options such as the type of polls and answers required can be selected through the application. Doodle works primary on a dedicated website, but a mobile application is also available. The company is based in Zurich and the service is available in 26 countries. Mobile Web Reference: www.doodle.com Screenshots (web app) Summer activities (2 - 6 July) Doodle English (GB e Sign up & Logi What's the occasion er activities (2 - 6 July) Useful features: Doodle is an example of collaborative time scheduling, in which users can input their

availabilities and find the most convenient time for all. Features related to time scheduling are highly relevant for the Families_Share platform. For example, through the Doodle platform, users can create a poll, providing description of the activity, location and tentative time slots. The users can select a time range from a calendar (monthly or weekly view) and edit specific time slots for different days. Once the dates and time slots are defined, the poll can be shared to the participants via email or with a dedicated link. Participants can express their availability and check in real-time the availabilities posted by other participants. While the poll is running, the interface shows the most voted date. Users can also export the poll with participants' availabilities to MS Excel or PDF.

2.2.3. Monday

//. monday .com	Description: Monday.com (formerly dapulse) is a visual project management tool that helps groups to organize themselves and collaborate. The tool is flexible and versatile and can be used in different contexts. Basically, it consists of a table that users can collaborative edit for different purposes such as time tracking, project scheduling, event planning or task management. Other functions include file sharing and communications among members of the same project.
------------------------	--



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



		Ţ) W	eb		Mobile					
rence: www	.monda	y.cc	m								
enshots (we	b app)										
G & Sectorytop	q)			(B Upp	ut Ond	e Team Members 🙆 🛛	G & Sections				× Weekly Shifts Log
Weekly Shifts					tr Visuteorite)	ê⁄4 ⊗ ≡	This scient is public viele to Weekly Shifts	al team members.	64	• ≡	Activity Epotenni Filler ty jerson.
B Binport Publics (noist)) 🖲 (0			Add column	e Greport Pulses (covit)			•	Time Column p TRO A > TRO A
O Luned	2010	Vourteer	Employee	External profession.	Luogo	Materiare O					Table II Lorge II
100-100	Accoglieros		۲	۲	730	🚍 Status	O Luned	2010	lavae	Eroque	Trailore 2 locality 1
900-1200	Laboratoria	۲	3	۲	730	T- Test	430-938	Accepteros			Traller I have I
1200-1400	Paras	0	۲	۲	Metter FBK	11 101	930-1230	Libertura			Lawrence to Par Tand
14.00-16.30	A55/12		(1)	۲		(g) Person	1200-5430	Parts	0		
16.30-16.00	45/13	0	٢	٢		P Timeline	1430-1630	45-13			
Construction (col						Date Date	110-1130	45-79			0 th 🖤 14.00-16.30 - 27 Attivita Attivita
O Martine		1000	linner	Edward restaures	Long	# Tags	Commit See Public (Com				0 🕐 👘 1000-1000 - Transa
100.00	auroli a		(m)	(B)	TID	E tambers					18 Aug.100 Tenn
900-1200	Liboritris		(2)	(6)	130		O Martes	10.4	-	Project .	
1200-5400	Leostria	(1)			Parat al secce		120-3.01				0 m 🕐 1200-1400 - Triamina Pares
14.00-16.30	45-03	۲	æ	۲			100-1200	Landers			0.0 🔮 00-100 Trimin Law.
16.00-18.00	A010	0	۲	۲			1000-1000	Lauren			Au
+ Charles Trian Public (Row)						2	New York			0	An Arrest Handle - 1 with
							100.00		0		0.01 🚱 1400-1630 - Triunge - Mare.) -

Useful features: Monday.com is a tool that allows user to create tables, including time plans. Users can define days and time slots (not necessarily the same for each day), and collaboratively edits the content including defining, in a tabular view, the details of the activities for each time slot. Monday.com can be also used to collect availabilities and to get a detailed overview of time allocation among members of the same group. These features can be supported in the Families_Share application, facilitating users and group administrators in getting an overview of availabilities and participation to the different activities.

3. Scenario and usage domain consolidation

According to the input of the activities conducted in Task.1.2 and the collection of user needs, it emerged that three main scenarios should be supported through the Families_Share platform, that are related to the different types of childcare activities that were rated as highly relevant to the project.

Scenarios - as also described in D1.1. Section 4.3.1. - are stories of people undertaking activities/interactions in a given context (Carroll, 2000). Scenarios usually represent in a narrative or visual form the following element:

- user's goals and motivations
- tasks that need to be accomplished
- interactions (social + mediated)
- a specific context (temporal, spatial, cultural)

In the co-design activities described in D1.1., scenarios were used to explore with parents and stakeholders potential uses of technology and to reflect on opportunities and criticalities offered by digital solutions, therefore providing a stable foundation for action-oriented reflection (Carroll, 2000).

At this stage of the design process, we exploited scenarios to refine the understanding of the different childcare activities that emerged as relevant in the different CityLabs. Scenarios are often used to represent





the (future) interaction between users and the system and exploited as communication tool within teams in order to easily communicate, negotiate and validate system requirements.

We describe in the next section scenarios related to three main types of childcare activities that have been identified starting from inputs collected in T1.2. and T1.3, namely *regular childcare, flexible childcare* and *last minute childcare*. These three types of activities differentiate for the type of planning needed, for coordination mechanisms and possibly for the number of people engaged in setting-up these activities. We describe the three scenarios in the following sections.

3.1. Classification of childcare activities and scenarios description

3.1.1. Regular (routinely) childcare activities

Regular (routinely) childcare activities happen regularly for some time, like organizing a trip to the swimming pool every Monday, or agreeing on a regular division of tasks for arranging a carpool to school or pick up locations.

Scenario description and use case: Carpooling to school

A typical routinely activity implies dropping off and picking up children to and from school. Every year, during the school period, parents need to coordinate their job's schedule with the school's one which are typically not aligned. This activity becomes more complex when parents have more than one child.

According to the interviews carried out during Task 1.2, many parents tend to arrange the above mentioned tasks by coordinating with their children's classmates and living in the same area/neighbourhood.

Parents at school ABC are considering to start to carpooling their children between home and school. Parents meet at the school and as they start trusting each other they also start helping each other for drop offs and pickups. Coordination happens mainly via face-to-face meetings (at school) and WhatsApp groups and it is often weekly based. Parents usually take the children to/from school by walk or by car. This usually involves small groups of parents with around 3-4 children all together. There might be a rotation and every parent plays her/his part equally, but in case some parents have more free time than others then parents' contribution might be different. Parents who take back children from school usually around 4/4.30 pm often keep them for the whole afternoon so that children can play together. Parents take children at home or at the park or in other places (e.g. play centres or libraries), or after-school recreational or sport activities, and they share information on schedules, locations and activities carried out with the other parents through WhatsApp groups. The typical mutual help group is formed among parents whose kids are classmates at school and share the same sport or after-school activity. WhatsApp groups are used also for communicating last minute changes/needs. For instance, a parent is not available anymore to pick children up from school and she/he communicates it through WhatsApp, in order to have a fast feedback from other parents. Moreover, parents share pictures of the children during the afternoon's activities with the other parents. In the case of sport activities, the group can be activated to facilitate participation to games and tournaments

during weekends as well so that one parent is mobilized to accompany small groups of kids, the exact number depending on the age group. Parents of children who attend also sport/cultural activities usually also have separated/additional WhatsApp groups with parents of children attending the same activities and living in the same area.





3.1.2. Flexible (seasonal) childcare activities

Flexible (seasonal) childcare activities are organized once in a while and have a greater degree of freedom in when and how to do them. In this case, groups have to negotiate a proper location for the childcare activities, as well as the more suitable period in which the activity will occur, taking into consideration the needs of parents and their availability in sharing their time.

Scenario description and use case: Summer activities

Examples of flexible activities are the organization of a week-long summer camp in August, planning an after school camp for the Easter holidays or organizing a Summer Lab for employees' children in an organization. These activities are usually related to a seasonal event such as holidays or national events. As part of Task 1.2 and Task 1.3, tools and strategies used by group of parents to organize flexible (seasonal) childcare activities have been identified. For instance, in Venice CityLab, the Local Church Groups regularly organizes every year, in June, a 2 weeks Summer Camp ('GREST') in Giudecca and Venice. The "GREST" is a widespread model throughout northern/central Italy based on the cooperation of parents contributing with their time, the Church making playgrounds and rooms available and volunteers (mostly teenagers/boys-girls scouts). The whole group collaborates in setting up and managing a variety of educational and recreational activities for the kids, 5 days per week and on a full time schedule.

Every year approximately 100 kids (primary school age) take part to the summer camp in Giudecca-Venice, while around 60 parents are involved in the organization of the activities with a core group of around 10/12 persons. The parents of enrolled kids join a WhatsApp group and are informed and asked for time to share, both for running workshops (from carpentry to cooking, painting, dance, English, coding, sports, etc.) and for logistic or cleaning tasks. Every day between 8-10 classes are run.

Organization activities start in February, first via face to face meetings and then two parents take the role of collecting parents' availability through a dedicated WhatsApp group and bilateral meetings/calls and composing a complex calendar puzzle on an excel sheet (see Figure 3).

Each table of Figure 3 regards a single of the GREST camp day which is divided in six moments (welcoming, initial activities, morning laboratories, lunch, afternoon laboratories, cleaning). For every moment the responsible parents are indicated, and for the laboratories sections the name of the laboratory and the name of the parent who is running it are specified.

The managers also provide a sheet summarizing all the activities for all parents. Throughout the summer camp, the WhatsApp group is used to solve emergencies (parents withdrawing from shifts and asking to be replaced) as well as to share other logistic information, and plenty of pictures.





AutoSave 🔵 or	🗈 🖪 🖬 🕤 🗐	च 🗐 Cale	ndario 2018_17_06	6_senza nomi — Saveo	d to my Mac		Q∙ Search Sheet	
Home Insert Pag	e Layout Formulas	Data Review	View			🖓 Tell me wha	at you want to do	🛃 Share
Calibri	• 11 • A• A	A• = = =	≫ •	General	▼	• 📝 • 📝 •	Insert *	Σ Z Z γ
Paste		. = = =	◆∃ ◆∃	• 🥩 • %)	◆.0 .00 .00 ◆.0 Condition Formatti	nal Format Cell ng as Table Styles	Format *	Sort & Filter
$\frac{1}{\sqrt{2}}$ × $\sqrt{-f_x}$								
А	В	С	D	Е	F	G	Н	I
REST 2018 - Calendario attività				,				
IIMA SETTIMANA				(anfo so atile Managlia – Cilinia – France				
Mattina (8:15-9:30	Accoglienza e preparazione:		LUN 11/0	o (referenci: Novella - Silvia - Franci	escaj			1
	Novella	Giuliana	Maria	Silvia	Francesca	Valeria		1
(9:30-10:30)	Lancio della danza, film e parte seria							
(10:30-12:00	Formazione delle squadre, gioco di av	vio e consegna magliette						
animatori adult	i Giuliana	Silvia	Francesca	Daniele	Christopher			
animatori ragazz	l Chullene	Re harte	Cit-Ja-	F	Devide	Havalla		4
Pranzo	Giuliana	Koberto	Silvia	Francesca	Daniele	Novella		1
Pomenggio (14:50-16:00)	Laboratori	D	0.1mm1		Lt antonia	1.1 In		1
referenti x lab	: Novella	Isabella	Giusting	Macchiette carre	lab spinner Claudia	Alessandra	Giardinaggio *	1
aiuto lab adult	<i>i</i>		Monica	Ravi		Santin	Francesca	1
								-
aiuto lab ragazz	r							4
	Pulizie							
(16:00-17:00)	Silvia	Rossella	Bottero					
Matting (0.17.0.30	Associanza e proparazione			MAR 12/6 (referenti:)				-
mattina (8:15-9:30)	Roberto	Adriana	Rossella	Liri	Stefania	Maria	Valeria	1
(9:30-10:30)	Attività formative: film, preghiera, can	to	-					
(10:30-12:00	Dragon boat + laboratori:							-
	Teatro	Disegni e pitture	Basket*	Pigotte	Arte	Dragon Boat*	Giardinaggio *	1
referenti x lab	Adriana	Martina	Luca	Anna	Veronica	Elena	Frate	4
aiuto lab adult				Giustina		Daniele	Stefania	1
aiuto lab ragazz	i							1
Pranzo	Veronica	Novella	Elena	Adriana	Silvia	Stefania	Roberto	
Pomeriggio (14:30-16:00	Giochi	Cituia	Class	Cituia	1			
animatori adult	Francesca	SIIVIa	Elena	SIIVIa	Laura			
attività settiman	a 1 attività settimana	a 2 Referenti gior	nalieri Persor	ne e attività 🕂				-

Figure 3. Excel file used by a group of parents in Venice for planning their availabilities for a summer activity

Similarly, in the "corporate" case study (addressed in the Trento CityLab, see D1.1. Section 4.2.5), it emerged that the working group "0-100" - composed by employees and HR staff - uses a file Excel to plan and organize activities, to collect employees' availabilities to volunteer for the laboratories, to find a proper location for running the activities and related support material (e.g. colours, paper, etc.).

Similarly, in the Kortrijk De Stuyverij CityLab, groups of parents self-organize exploiting Excel files for planning and coordinating shared childcare. It is worth noting that parents first look at the most suitable period for planning childcare, looking at parents needs and availability (see Figure 4). Once they select the period, they start organizing childcare activities (see Figure 5).





																			1								1			
			Ch	0p ildca	vang are s	zon umr	ner 2 ner 1	018: 2018	oud 3: Pa	ers e aren	n ex ts 8	tra's	tra's																	
VAT IS DIT? /ul in onderstaand sche lat een ouder aanwezig de planning zijn later uit Belangrijk: vul indien m voor dat je maar één ke	ema in op w i kan zijn. O eraard nog iogelijk liefs er per week	elke d p basi mogel t meei i ingep	agen j s hier ijk. rdere o land v	e zelfv van ku dagen vordt.	voor op nnen v per we	ovang ve dar eek in.	kan zo al eer Uitera	orgen. I n voorli ard zo	Dat wi opig p rgen v	il zegge Ianning we er d	en dat g opma an in c	je op o aken. A le defir	die dag Aanpa nitieve	g kan z ssinge plann	orgen n in ing	V Ir ti so Ir	What is the o hat 1 o chedu mport	s this? docum of the ile. Fu ant: if	paren paren ture a possil	eneath ts can djustm ble, fill re 1 d	, fill ir be th ents a in mu av / w	n for v ere or are off iltiple reek ir	hich of that course days /	lays y day. B still p week nal sc	ou car ased o oossib . We o heduk	parti on this le. offcou	cipate , we c rse wi	in the an ma	e childe ke a te e shur	care. 1 empoi e you
OE INVULLEN? ful julie namen samen = Ik kan geen opvang = ik kan wel opvang vi = ik kan wel opvang vi	in op één lij voorzien oorzien oorzien en v	n. Vul wordt l	dan ir iefst o	n de va p deze	akjes e e dag ir	maast	(per d	lag) éé	in van	de vol	gende	cijfers	in:			H F 0 1 2	low to ill in y = ca = ca	o fill the our na annot an pro an pro	nis in? ame or provid vide c vide c	n 1 line e child hildcar hildcar	e. In th Icare e e and	ne cell I woul	sto th d love	e right te be	t, fill ir schec	n (/ da luled 1	te) on	e of th	ne follo	owing
			Juli				-	Juli	-				Juli				A	Augus	tus			A	ugust	us			,	August	tus	
Naam ouders	9	10	11	12	13	16	17	18	19	20	23	24	25	26	27	6	7	8	9	10	20	21	22	23	24	27	28	29	30	31
Parent name	1	1	0	1	2	1	1	0	1	2	1	1	0	1	1	0	0	0	0	0	1	1	0	1	1	1	1	0	1	1
					-																	-								
				-	-												-													

Figure 4. Excel file used by a group of parents in Belgium for planning the calendar for a childcare summer activity

	Opvang z Childcare	omer 20 summer	1 8: k 2018	indje : Kic	es Is																	
WAT IS DIT? Vul in onderstaand schema in op welke dagen je voor je kindje(s) opvang nodig hebt. Op basis hiervan kunnen we dan al een voorlopig planning opmaken om te weten hoeveel kindjes op welke dagen aanwezig zullen zijn. Aanpassingen in juliie planning zijn later uiteraard nog mogelijk.								What is this? In the document beneath, fill in for which days you need childcare for your kids. Based on this, we can make a temporarely schedule that lets us know how many kids will be there on the specified days. Future adjustments are offcourse still possible														
HOE INVULLEN? Vul jullie naam, en die v dan in de vakjes ernaas 0 = geen opvang nodig 1 = misschien opvang n 2 = opvang nodig	OE INVULLEN? ul julie naam, en die van de op te vangen kindjes in op één lijn. Eén kindje per lijn. Vul an in de vakjes ernaast (per dag) één van de volgende cijfers in: = geen opvang nodig = misschien opvang nodig (ik weet het nog niet) = opvang nodig								How to fill this in? Fill in your name & that of your child on 1 line. 1 child / line. In the cells right to the name, fill in // date) one of the following numbers: 0 = no need for childcare 1 = maybe, I don't know yet 2 = need for childcare											e		
				Juli								-	A	ugust	us			Augustus				
Naam ouders	Naam kindje	2	3	4	5	6							21	22	23	24	27	28	29	30	31	
Parent name	kid name	2	2	2	2	2						2	2	2	2	2	0	0	0	0	0	
Parent name	kid name	2	2	2	2	2						2	2	2	2	2	2	2	2	2	2	
Parent name	kid name	2	1	1	2	1						0	0	0	0	0	0	0	0	0	0	
Parent name	kid name	1	1	1	1	1						2	2	2	2	2	2	2	2	1	1	
Parent name	kid name	0	0	0	1	0						1	0	1	1	0	1	1	0	0	0	
Parent name	kid name	0	0	0	1	0						1	0	1	1	0	1	1	0	0	0	
Parent name	kid name	0	0	0	0	0						0	0	0	2	0	2	0	0	0	0	
Parent name	kid name	0	0	0	0	0						0	0	0	2	0	2	0	0	0	0	
Parent name	kid name											1	1	1	1	1						
Parent name	kid name	0	0	0	0	0											0	0	0	0	1	
Parent name	kid name	0	0	0	0	0						2	2	0	0	0	2	2	0	0	0	
Parent name	kid name	2	2	1	2	2						2	2	1	2	2	2	2	1	2	2	

Figure 5. Excel file used by a group of parents in Belgium for adding their availabilities and needs

The following scenario describes one of the most common use cases of the Families_Share platform. The platform is used by an informal group of parents for organizing childcare activities for the summer period.

Eline (42), mother and single parent of two children: Lisa (7) and Laura (10), is looking for childcare for the next summer period in July and August. The previous summer, Lisa and Laura joined a pony camp, but this year Eline wants to find an alternative that is less expensive, and which is still enjoyable and full of social activities for the children. At the local primary school in Ieper, she hears at the school gate that also other parents are looking for alternatives for arranging childcare during summer. Mark, father of Ben (7) and a playmate of Lisa, mentions that his family is using the Families_Share application for arranging childcare during the holiday periods. He explains the core timesharing principles to Eline, and says that already a group of parents of the primary school has an active group for self-arranging childcare. Mark asks the email address of Eline, and says that he will invite her to the group so that she can explore the application and try it out. In this group, they are currently arranging the childcare for the





holiday period in July, and which fits to the needs of Eline. That evening, Eline receives an email from the Families_Share application to join the "Primary school leper", she clicks on the group and can see that there are 7 other parents in the group looking for child care in July.

Before entering the dates for which childcare is needed for Lisa and Laura in July, she completes the requested profile details. Eline enters her first and last name, a short description, contact details and address. Next, she clicks on the button "add children" to make a profile for Lisa and Laura. She enters for both children first and last name, date of birth, gender. Before finishing the profile descriptions, Eline has to download and print a separate file for completing the profile information of her children. This separate file registers info about specific healthcare issues such as medicines, allergies, asthma, epilepsy, diabetes, toilet-trained, etc. Eline has to complete this file for each child, and also has to mention her contact details, her doctor's, and any other possible babysitters that would like to join the group. Last, she also sticks a note of the National Health Service on the document. After completing the document, she scans it and uploads it to the Families_Share application. All is set now to start co-playing with other parents in the group of the primary school in leper.

Eline searches again for the group "Primary school leper", and in the list view, she clicks on the sign up button for the holiday period in July. Her request is now being checked by the administrator of the group. Charlotte, who is the administrator and starter of the group, receives the request and accepts it. Charlotte was already notified by Mark through WhatsApp that a new parent at the school was looking for childcare in July through Families_Share. When Charlotte created this group in Families_Share for the primary school, she named the group "Primary school – leper", and added a short description, website link to the school, and the address. Before she did this, she and other parents from the group talked with the school principal about the usage of the classrooms for child care activities, and followed the manual to prepare everything related to the insurance.

Charlotte manages all the holidays periods for this group, and also created the calendar for July, and filled in certain variables: number of co-playing days, maximum number of children per parent on one day (which is set standard at three), and time and ending time of the co-playing day. Charlotte will also organize a meeting with all parents before the start of the holiday period in order that all parents get to know each other, and can discuss further arrangements and practicalities.

In the meantime, Eline further explores the application, and sees in the communication stream several messages and uploaded pictures of previous co-playing moments organized with the group. She sees that one of the parents in the group organized an autumn workshop, whereby the children made paintings and art works out of collected green, red, and brown leaves and nuts which they collected in the forest nearby the school. She also sees another message whereby parents are requested to always foresee snacks for the co-playing dates, preferably healthy fruit snacks. Further, Eline watches one more time the explanatory video on the homepage of the Families_Share application as to know how the timesharing principle works.

A few minutes later, Charlotte approved the request to join the holiday period in July, and Eline can start marking the dates now for which she needs childcare for Lisa and Laura. The mother indicates that from Monday 6/7 till Friday 10/7, childcare is needed for Lisa, and for Laura for all dates except Wednesday as then Laura will go to her niece and aunt for a sleepover party. Next, Eline also takes her personal calendar and searches for the dates on which she might be available for co-playing as a parent. She is not available in that week from 6 till 10/7, but she has some days off in the following week. Eline indicates that she will co-play on 13/7 and 15/7, and also adds Lisa and Laura to that particular date, she also notices that she can fill in the costs that she will make for co-playing that day as a parent.

Charlotte will close the agenda when all spots will be filled in for this particular holiday period. If spots are still open, then still other families or babysitters, grandparents, or other family members can join. Just before the holiday period in July, Charlotte will also organize an informal get-together with all the parents and children to connect. For the time remaining, they will further keep in contact with each other through a WhatsApp group.

Scenarios were also elaborated in a visual form, in order to make clear some of the issues surrounding shared childcare, such as the context of use (e.g. employees working in an organization) and the interaction among participants (see Annex 1).





3.1.3. Contingency management (last minute childcare)

Last minute or "emergency" childcare activities are those activities that need to be organized to respond to unexpected or unplanned events, like, for example, in the case of strikes at schools when parents need to take care of children during working hours.

Scenario description and use case: Childcare activities in a shared space within a company

In Trento CityLab activities conducted in T1.2 provided insights on how Families_Share platform could support parents in arranging last minute childcare within organizations. In particular, opportunities given by sharing a dedicated space for childcare within the organization were discussed. In this respect, Families_Share might provide support to group of employees to arrange last minute childcare involving the use of shared spaces or resources within their organization/company. Co-design workshops organized with employees pointed out that organizing last minute childcare with colleagues also for short period of time (e.g. few hours) could be the starting point for organizing also more complex childcare activities (see flexible-seasonal childcare).

The scenario discussed and proposed by employees is the following:

It is Monday morning. Anna – an employee in the ABC organization, mother of Tim 7 y.o. – discovers that schools are set to close on Wednesday because of a teachers' strike. On Wednesday she already planned an important meeting with external visitors that she cannot postpone. She has to find a solution quickly! She talks about the strike with her colleagues during the lunch break. Jonathan, a colleague, explains that there is a dedicated room on ABC premises that employees can use to spend time with their children while they are at work. He sends an email to Anna with the link to the website where Anna will find further information of this opportunity and where she will find a calendar in order to check if this space is available. In the evening she read the email and visit the website. She also check the calendar showing the availability for the shared space for childcare. She notices that a colleague will also use this space. She thinks that maybe they could organize in turn in order to guarantee the presence of an adult while at the same time be able to participate to the meeting. The next day, Anna through the app connects with the colleague that booked the shared kids area. They decide to meet in the afternoon in the company cafeteria to know each other and understand how they can support each other.

3.2. Cokido experience

As already mentioned in D1.1. (Section 3.2), the Cokido application has a special status in the project since it is the basis upon which the Families_Share platform is designed. It was indeed crucial to the consortium partners to get the opportunity to try the Cokido application first-hand to better understand how the service works and how it can be implemented in the context of each CityLab.

After exploring user needs and the CityLabs specificities through the co-design workshops, members of the consortium participated in an exercise based on the Cokido online application to get a general overview and first-hand experience of a collaborative process for shared childcare. De Stuyverij and IMEC prepared an exercise [see Annex 2] to support the project partners in getting a better understanding of the processes (both online and offline) and features of arranging childcare through co-playing with Cokido. The exercise follows the user journey that was presented in D1.1 and describes a user scenario that was played by different members of the partner institutions. Although the scenario was fictive, it was close to reality on how groups of parents currently use Cokido, how they form a group and arrange the activity, how they





prepare the agenda, etc. The results of this experience further facilitated a shared understanding and a common knowledge on the activities that should be supported by the Families_Share digital platform.

Participants from the Families_Share consortium were divided in two groups and played the role of parents. Each group had to follow a script presenting a description of the activity of a fictive group of parents that decided to organize summer childcare activities using the Cokido approach and digital platform. The scenario included a description of the situation and a list of step that had to be followed by each participant. The exercise lasted for four days.

The main findings from the analysis of the feedback provided by the participants to the Cokido experience are reported in Table 1.

Feedback	Description
Benefits of the Cokido experience	The experience helped the consortium members in exploring the Cokido platform simulating a real-world situation while playing the role of "parents". The partners appreciate the overall functioning of Cokido, including features such as creating groups, inviting a person, adding personal information, creating and managing periods for childcare activities. Partners found that the app had a great potential and that its strong point is not only on the technological side but in combining the Cokido approach with a limited but well-designed digital support. This should be the path to be used in the design of the Families_Share application.
Group size	Some partners noted that the application could work better with groups with less than 25- 30 members, and for activities with a limited number of timeslots (4/5 maximum). The steps required to provide some information might limit the use of the application for larger groups, and this might be problematic for some CityLabs.
Homepage	The homepage is one of the most important parts of the interface. Some participants were not sure on all the functions that were supported (e.g. how to search for groups). Some partners suggested to provide more inputs for novice users. For example, including informative material (video, images) to better understand the value of approach of sharing childcare and the steps required (the 7 steps of Cokido could be also here or when a group is opened). Notification of messages or other relevant information (lack of volunteers, etc.) could be displayed in the home page to trigger participants However, the registration, invitation and the planning process were seen as easy to follow and easy to handle. Some graphical aspects, e.g. showing all existing groups highlighted in different colours, were considered positively since they give a great overview of the variety of groups.
Messages and notifications	Some partners suggested to improve the message section in order to allow a more organized discussion. Some users felt that they were missing comments and input from the community, since they could not receive any notification or direct message via email. Partners found that the application can be an opportunity for trustful communication in closed groups which allow new members only via invitation or approval and which is further free in communicating in different languages.
Location	Some users noted that finding places to host activities could be a long process because options are not transparent. Therefore, additionally mapping spaces (and their qualities as well as contact person, fees, etc.) to host activities would be a useful addition for the app, in





	particular with respect to certain CityLabs.
Adding availability	Adding availabilities of parents or children was one of the weak points of the Cokido application that should be reviewed in the Families_Share platform. The Cokido app requires the parents to select and confirm the availability for all time slots. Partners expressed that they would like to have a easier and quicker way to register children to the different activities. They would also require different views, for example to get an overview of all the availabilities assigned by a single user across multiple activities.
Application in other CityLabs	Considering the application of the Cokido platform to different CityLabs, the consortium partners highlighted some areas for improvement. For example, a more effective support for time-management and coordination among group members. Other partners reported that the usage of the application would need to be introduced via a local contact person (e.g. community manager) and institution which have already established trust (e.g. day care centres, schools, etc.). The development of the new platform should consider this aspect.

Table 1. Results from the Cokido experience

4. Needs refinement and task flow definition

The bases for the design of the first version of the Families_Share platform were laid out during a project meeting in Limassol (Cyprus) [described in D1.1, Section 5]. The meeting had the goals of aggregating the needs collected at the local level from the different CityLabs and to prioritize the functionalities emerged in the local co-design workshops. In the meeting, the affinity diagramming exercise pointed out many needs shared among the different City Labs, namely:

- The platform should support the creation and the management of "trusted" groups of people aimed at sharing childcare duties in several different ways; volunteering and community values are the driving forces that are recognized and should be fostered.
- There are three main typologies of activities that need to be supported: regular, flexible and possibly the last-minute or emergency activities.
- Offline encounters are important for trust building and the platform should encourage face-to-face communication and coordination.
- Support in time allocation is crucial and it should be a major functionality (or set of functionalities) in the platform.
- Management of space is critical and platform should support the group in finding, assessing and, when needed, contracting a proper location.

The main features of the Families_Share platform, presenting for each of them the main functionalities, the users involved and their role, the ending issues to be tackled during the Venice meeting, namely:

- Community configuration and set-up
- Registration
- User and children profile
- Groups creation and management
- Activity creation and management





These initial inputs have been worked out together with input described in Section 2 and Section 3 of this document in order to define the service features and to identify pending issues and critical aspects to be addressed before the implementation phase. We synthesized these in the following sections.

4.1. Features, functionalities and pending issues

4.1.1. Community configuration and setup

The configuration of the CityLabs communities should be available to adapt the platform to the different contexts in which Families_Share will be deployed.

CityLabs communities are characterized by the following features:

- Type: social vs corporate community
- Name
- Picture
- Description
- Language
- Geographic area
- Available resources (locations, agreements, insurance, access rights, etc.)
- Group management definition: for corporate community it might be that specific rules should exist for groups, that can only activate a limited number of features, while groups in "social" communities have more freedom (e.g. exchange model, reciprocity, etc.)

The community configuration is done by the community manager(s), in several contexts a team of community managers should be foreseen (e.g. In Venice and Trento: an overall team management by each partner, with a distributed model, to be flexibly interpreted, involving several individuals volunteering from the local networks, who are left with the possibility of deciding on their rules). The community manager also provides support to groups (answer questions, provide resources, support groups in managing conflicts, provides legal and insurance-related support).

Pending issues

- Consolidate the community management features.
- What is decided at the community level?
- What is decided at the group level?
- Necessary to define parameters that can be tuned when defining a community vs group?

4.1.2. Registration

The steps that a user should follow for accessing the Families_Share platform, register and participate to a group are the following:

- Download the application
- By downloading the application, the user join a specific community (social or corporate)
- Registration
 - user will need to fill the consent form and then to do the authentication
- Welcome and first highlights on the benefit of the approach, the main steps for organizing





childcare, etc (check relevant material to trigger user participation and engagement)

- Once registered, the user can:
 - o see all the resources of the community
 - o search for groups or activities
 - o create a new group
 - o join an existing group

Pending issues

- Define which contents and information are accessible before and after the registration, e.g.: the information related to community activities are visible also for non-registered users? For example, testimonials, stories, etc.
- For "Corporate" Communities, mechanisms to manage access should be provided in order to guarantee that only the network of employees can register.

4.1.3. User and children profile

"Adult" user profile:

Profile building should be designed as incremental features where data and information are requested only if relevant, for instance

- Initial phase: only contact information: email, mobile phone, secondary phone, emergency phone, WhatsApp, address)
- "about yourself" section can be filled in different moments (when participating to an activity)

Children profile

- keep it flexible (for some countries it is mandatory to ask the gender, in other no)
- no photos
- health-related issues only shared with parents that will take care of the child

The user profile is characterized by the following features:

- Name
- Role in the group: admin, financial, manage agenda, location, etc.
- Description: optional
- Add children profile
- Add other external volunteers (such as family members or siblings) and professional educators.

4.1.4. Groups creation and management

Groups can be created by each registered user. Groups members are registered users that can be:

- parents
- volunteers
- external paid professionals (e.g. educators, shard baby-sitters, au-pairs)

Groups can be:

- open: still looking for other members
- closed: the group is full and no more participants can enter the group.

In both case, groups can decide to be public (visible by other users) or private.





- public: some information about the group can be accessed by Families_Share users.
- not public: all information about the group are hidden to non-members

Groups are characterized by the following features:

- Name
- Description (e.g. goal of the group, which type of activity do they propose?)
- Picture
- Members
- State
 - o open (other members can join) or closed (no other member can join the group)
 - o visible or private
- Groups administrators
- Normal users
- Agreement on type of exchange and reciprocity model (which is the type of exchange that the group propose? Time-banking, solidarity-based where members contribute in different ways and according to their possibility).

4.1.5. Users roles

Group Administrator(s)

Groups can be created by registered users, that become "Groups administrators"

Several "Group administrators" can exist in each group, actually, the platform should encourage to identify more than one "Group administrator" in order to guarantee the group functioning.

Group administrators:

- can invite other persons to join the groups
- can change the status of the group members in "Group administrators"?
- approve the request of user to join a group
- close the group?

Group members

Group members are those who are part of a group. A user can be member of different groups. In the Cokido platform, there are five distinct roles in a group with different responsibilities (who takes care of the agenda, who takes care of the toys and other material, who manages the financial transactions, who takes care of the space and the administrator).

Pending issues

- make visible user roles (who takes care of agenda, etc?) should the system suggest to user that they can take care of these aspects?
- Agreement: how agreements are managed by groups? Are some main aspects of the agreement visible when entering a new group? how?
- Do group members communicate through the platform?





4.1.6. Activity creation and management

Groups members (administrators and regular members) can create an "Activity". An "activity" is incrementally designed as all the elements are found within the group (volunteers, children location, atc.) or outside the group (looking for other volunteers, space, insurance). Planning an activity requires therefore negotiation and collaboration among group members at different levels, and implies offline and online interaction.

An activity can be closed if some of the conditions required to run an activity are not met (e.g. not enough volunteers or children, lack of space, etc.).

An activity entails different types of group interaction:

- *planning*: in which period will the activity take place? how many volunteers? How many children? etc
- *coordination*: volunteers should coordinate in order to organize the activity

We can take inspiration from the Cokido experience and their approach:

1) selection of the time of needed childcare,

2) selection of the availability in providing childcare,

3) final planning.

The agendas of the group are closed very soon and in case of changes (upcoming unavailability of the parents) the group can fix them also, if needed, by appointing external babysitting services.

An activity is characterized by the following features:

- Name
- Description
- Type:
 - Recurrent (routine): happen regularly for some time, like organizing a trip to the swimming pool every Monday, or agreeing on a regular division of tasks for take to school and pick ups
 - Seasonal / flexible: are organized once in a while and have a greater degree of freedom in when and how to do them: like organizing a week-long summer camp in August
 - Last minute: those that need to be organized to respond to unexpected or unplanned events, like for example, in the case of strikes in schools when parents need to take care of children during working hours
- Location
- Date start- date end
- Number of volunteers involved
- Number of children involved
- State
 - o open
 - planning phase:
 - looking for volunteers
 - looking for a location



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



- place available for more children
- agenda definition
- running
- o closed
 - evaluation

The group can evaluate the activity in order to improve the organization of childcare activities, to learn from their experience and maybe to share this knowledge with other groups.

4.1.7. Calendar

Each group has a shared calendar/agenda as the main tool to coordinate the shared childcare activities. The calendar/agenda should have the following features:

- allow group members to join the activity (through the calendar) as an active participant
- give or not give the availability to share time for childcare
- indicate children taking part to the activity

Different approaches for supporting group coordination and planning of childcare activities were discussed:

- 1. the "doodle" and the "calendar" approaches consist in making visible the availability and the constraints of the different members of the group and
- 2. an automatic system that, after considering the availability of the individuals, assign the time slots.

The former is probably more suitable for small and medium groups, it might also support larger groups; while the latter might be more complicated but in could be necessary for larger groups.

4.2. Privacy compliance needs

In the elaboration of user and system requirements, attention has been given to privacy and data protection. A crucial issue addressed in the co-design process within T1.2 and T1.3 (described in D1.2.) and to be further explored as part of task 6.3. (Trust and safety framework) was to find an efficient solution for dealing with privacy issues and private data, in a way that allows community members to share relevant information (relevant in order to raise reciprocal trust) while at the same time protecting personal data— with particular sensitivity given to protecting data on children. In this section we summarize the needs emerged regarding privacy, differentiating between registered and non-registered users.

4.2.1. Registered users

Registered users are users of the Families_Share platform who have previously registered. They are provided with credentials and can login into the platform. Registered users can join groups and create activities. Group administrators are all registered users.

Regarding privacy concerns, the registration process necessarily provides personal information to the platform. Following the GDPR legislation, registered users can request to access any personal data gathered through the platform, they can request to export their personal data in a machine-readable format and can request to delete their personal data.

Furthermore, the consortium partners decided that sensitive information about children - as health-related data - will be disclosed to other users only when these information will be relevant for the childcare activity





(that is only once the childcare activity has been planned) and only to those users that will take care of the children. In any case, to avoid the disclosure of any sensitive information about Families_Share users and their children, an explicit consent should be asked.

4.2.2. Non-registered users

Non-registered users are users who access the application without completing the registration process or without logging into the system. Non-registered users might get access to informative content (e.g. about the Families_Share project) or browse groups that have provided their consent to share their information to the general public (for example for sharing knowledge or for looking for new members). Sensitive information is not disclosed to non-registered users.

4.3. User journey refinement and task flow representation

A first version of the user journey was detailed in D1.1. (Section 5.2). The user journey is a graphical representation used to map the relationship between a user and a service across all channels in which they interact (e.g. people, telephone, website, mobile apps, etc.). A user journey is always represented from the user perspective but also incorporates the touch-points between the service (and the organization behind it) and the user experience requirements as the journey progresses.

Based on the user journey, we defined the task flow. Task flow is a representation of the path that a user follows through an application. In our case, the task flow includes all the tasks that a user can perform through the Families_Share application, giving an overall representation of the service architecture. The task flow shown in Figure 6 has been divided in four main sections:

- 1. Registration and user profile
- 2. Creating and managing groups
- 3. Creating and managing activities
- 4. Time and availability management and scheduling





Moreover, we compared the functionalities already implemented in Cokido and checked whether the tasks listed in the Families_Share task flow were already supported (or not) in the Cokido platform.





5. UX and UI design

The next step in the design process for the Families_Share platform consisted in the refinement of the system and user requirements and the creation of the visual wireframes, including indications for the UX (User experience) and UI (User interface) design. To actively involve the consortium partners in this process, we adopted the "design sprint" approach (Knapp, Zeratsky, & Kowitz, 2016)

A "design sprint" is a rapid process that uses design thinking to reduce the risk when bringing a new product or service to the market. The activity is organized in "sprints" (a concept originated in the Agile method) were teams of any size are asked to solve and test design problems through the "design thinking" process, a problem solving process developed by IDEO and by the Stanford d.school (Johansson-Sköldberg, Woodilla, & Çetinkaya, 2010). These two concepts ("sprints" and "design thinking") were adapted to the idea of "design sprints" by the Google UX teams and Google Ventures who refined and disseminated the design sprint approach (Knapp, Zeratsky, & Kowitz, 2016). In our case, we adapted the approach to quickly identify design issues and to converge on possible solutions (Figure 7).







Figure 7. The process followed in the design sprint workshop

5.1. Venice design sprint workshop

A workshop has been organized in Venice on the 18th and the 19th of July 2018. During the two-day workshop (Figure 8), partners of the consortium took part to the design sprint with the goal of defining the requirements and starting to sketch the platform interface. The sprint was based on the insights gathered through the co-design workshops conducted at the local level (See D1.1. Section 4.4), the results of the requirements prioritization process done as part of T1.3 (see D1.1. Section 5) and the first-hand experience with the online Cokido platform (Section 3.2).



Figure 8. Venice design sprint workshop

The first step in the process was the discussion and revision of the user and system requirements. This step resulted in a list of requirements that was shared with all the members of the consortium (see next section and Annex 3).

The second step in the design sprint workshop was the creation of a set of wireframes for the Families_Share application. A wireframe is a visual representation of a user interface that displays the functional elements, stripped of any visual design or branding elements. Wireframes are used for planning





a site or application's structure and functionality and for communicating what the items on that interface should be, based on the user needs. These preliminary wireframes were made by workshop participants using pen-and-paper. For supporting the creation of the wireframes, a set of wireframes from the Cokido application has been prepared (see Annex 4). In this way, participants could have a reference to start with instead of starting to design the wireframes from scratch. Examples of the wireframes created during the workshop are presented in the next section.

Lastly, after the elaboration of the results from the design workshop, the FBK team produced the graphical assets, the interactive prototypes and the final specification report for the Families_Share platform.

5.2. Results

The outputs of the design sprint workshop included a revised and updated list of requirements to be used as reference for the development of the platform, and a number of design ideas that served as a basis for the creation of the interface wireframes and interactive prototypes.

5.2.1. Requirements list, features revisions and updates

The full list of requirements is described in Annex 3. The list includes a total of 64 requirements and corresponding criticalities. The requirements are also grouped in categories (15 categories) and priority level (Low, Medium and High). The requirements were also divided in requirements to be implemented in the first release of the platform ("first prototype version") while another set of requirements were left for the second implementation cycle ("second prototype version"). The subsequent phase of the design process described in Sections 6 of this Deliverable is based on the elaboration of the first set of requirements with the goal of defining the UX and UI of the first release of the Families_Share platform.

Total number of requirements: 64													
Categories (not exclusive)	# of requirement s	Categories (not exclusive)	# of requirements	Priority level	# of requirement s								
General	2	Privacy	9	High	27								
Website	2	Search	2	Medium	21								
Interface	3	Group management	4	Low	10								
Community management	4	Communication	6										
Registration / Log-in	4	Activity management	21										
User categories	3	Notifications	3										
User profile	6	Children info	4										
Calendar	5												

The following Table 2 summarizes the requirement list.

Table 2. Summary of the requirements listed in Annex 3





5.2.2. Preliminary sketches and wireframes

During the workshop, participants created preliminary sketches and low-fidelity interface wireframes for rapidly communicating interaction designs and ideas. Wireframes are commonly used in Interaction Design to illustrate design concepts, visual layout, interface behaviour, and the general "look and feel" of the interaction. Wireframes usually serve to answer these questions (Cao, 2017):

- Structure How will the pieces of this application be put together?
- **Content** What will be displayed?
- Informational hierarchy How is this information organized?
- Functionality How will the interface work?
- **Behavior** How does it interact with the user? And how does it behave?



LOW-FIDELITY WIREFRAME





Figure 9. Sketch, low and high fidelity wireframes (examples from the design of the Families_Share platform)

Sketch and low-fidelity wireframes were created during a collaborative activity focusing on the four main functionalities supported in the Families_Share application, namely (i) registering and creating a personal profile, (ii) creating and joining groups of users, (iii) creating and joining activities proposed by group members and (iv) managing participation to these activities. This material was used as input for refining design ideas and creating high-fidelity wireframe after the workshop.

A part of the wireframes created are reported in Figure 10 and in the remaining of this section.










Creating and managing activities HOME TAB A PHIEI TA WYBARI TAB GROUP STAR HART ATTAINED HARAN Armentals an 00 Summer course War adre R& 10 3 NON nessages 8= Ø @ _____ @ ____ SWITTER CAMP arree scores e G 00 Ð a worth · ACTION ACTION PARONA D AL ACTIVITY



Figure 10. Some of the mockups and wireframes developed in the design sprint workshop The wireframes represented some design concept as described below:





Landing Page



The landing page provides information on the group, such as scheduled activities and pending messages and notifications. The page includes a calendar and a dedicated navigation bar on the bottom.



Group page

The group page shows information on the group activity, including (i) messages and notifications, (ii) planned activities and (iii) information on the group members.





Group and activities



Group members can propose new activities by accessing a dedicated section on the application. These activities are displayed both in the calendar or in a list.

Group creation



The interface enables group administrators in creating new groups. The interface guides the user through the process, giving indications on creating the group and on inviting new members.

6. Design specification

The results of the design sprint workshop were further elaborated in order to produce the documentation describing the visual identity, high-fidelity wireframes and the interaction flow that will guide the development of the first release of the Families_Share platform, as part of WP2. In creating the wireframes for the application, we followed the Material Design principles. Material design (https://material.io/) is a design language developed by Google, utilized in many mobile and web applications. The benefits of adopting the Material Design language is a more consistent visual language and a faster development, since most of the interface components (buttons, menus, icons, drawers, etc.) included in the wireframes can be easily integrated while coding the mobile application.

6.1. Visual identity

The Families_Share logo represents the concept of co-creation and sharing. The four shapes depicted symbolizes collaboration and flexibility, that are attributes of the activities supported in the platform.





Inspired by the colours in the project logo, three different proposals for the online platform color scheme have been elaborated. The three proposals includes a primary and a secondary color, and their lighter and darker variations (see Annex 5).

The three color scheme have been scored in a survey filled out by Families_Share partners. The survey investigated also whether the color scheme was already used by other popular brands or digital services in the CityLab countries. The results (see Annex 5) indicate that the first color scheme (Cyan and Orange) was the preferred and more suitable one (Figure 11).



Figure 11. Color scheme chosen for the interface of the mobile application

Based on the selected color scheme, we designed an application icon inspired by the graphical elements of the project logo (Figure 12, 13 and 14). Variations of the logo for each city labs were also created since different instances of the Families_Share application will be available through the Play Store (Figure 14).





Android Legacy Icon



Figure 12. Icon proposed for the mobile application



Figure 13. Representation of the Families_Share application in Android and in the Play Store







Figure 14. Variations of the application icon for the seven CityLabs

6.2. Consolidated wireframes

The subsequent phase in the design process was to create high-fidelity wireframes for the Families_Share application. These wireframes represents the "look and feel" of the platform and can provide indications on the structure, the content and the functionalities envisioned for the application. This information can guide and direct the development process.

Considering the main activities supported in the platform and described in the user journey / task flow map (see Section 4.3), high-fidelity wireframes were designed according to the user and system requirements (Section 5.2.1 and Annex 3).

The design process that lead to the creation of the wireframes was characterized by a number of iterations. The consolidated wireframes are the result of a cyclic process of prototyping, discussion, and refining and are included in Annex 6. The wireframes represent the most important functionalities in the application, including registration, user profile management, group and activity creation, scheduling and tracking. In the following section we report the list of requirements corresponding to each functionality and provide a detailed description of the UX and UI design choices represented in the wireframes.

6.2.1. Registration, user profile and privacy

ID	Requirement	Description	Group	Priority
7	User name visibility	User should be able to decide if their name should be	User profile	High
			Privacy	
8	User search visibility	Some users could decide to be invisible to the community.	User profile	High

The following table outlines the requirements related to registration, user profile and privacy.





		If they are not visible, to add them to a group or as a parent you should input the email or telephone number	they are not visible, to add them to a group or as a parent ou should input the email or telephone number Privacy			
9	Cancel profile	Users should be able to cancel all their information	User profile	High		
			Privacy			
11	Export all information	Users should be able to export all their data stored in the	User profile	High		
			Privacy			
12	Integrate children	Children information should be provided within the app	Children info	High		
	platform	Data should be encrypted	Privacy			
13	Showing children basic information + special needs	hildren basic hildren basic information such as name, age and gender should be visible to the other members of the group (when organizing an activity) If there is any special needs, a symbol can be placed next to the children name		Medium		
		Integrate child card inside the app. So that we can search e.g. based on the age of the participants of the group. Age and gender are most important info too. Perhaps also add information about possible health issues (call it "special needs").				
14	Managing who can view your full children information	When users provide their children information they should be notified and accept that these information can be shared with other members of the group. Users should be able to	Children info Privacy	High		
		decide who can see this info. [Information sharing option]				
15	Export children	Users should be able to export in a PDF file the children	Children info	High		
	information	information of the activity they are involved	Privacy			
16	Privacy consent at the	When users register in the platform, the platform should	Log-in / Registration	High		
	registration	necessary privacy notice and other information at the time user consent is required.	Privacy			
		The registration process stops if user do not provide the consent				
17	Parents can add other Parents have different profile and their share the children profile		Children info	Medium		
		A parent can be added as co-parent / guardian / family member	User profile			
21	Single sign on	This is an optional feature. We will start with registering for a local account functionality and perhaps integrate that in the future.	Low			
37	Log-in with email	Allows log-in with email address	Log-in / Registration	High		

Table 3. Requirements related to registration, user profile and privacy





According to the requirements listed in the table above, a set of high-fidelity wireframes were elaborated.

LANDING PAGE



families

About the project

Funded under the Information and Communication Technologies programme of Horizon 2020's Industrial Leadership component, and its call for collective awareness platforms for sustainability and social innovation, the Families_Share project is developing a social networking and awareness-raising platform dedicated to encouraging childcare and work/life balance. The platform capitalises on neighbourhood networks and enables citizens to come together to share tasks, time and skills relevant to childcare and after-school education/leisure, where these have become unaffordable in times of stagnation and austerity.

The challenge

Balancing work and family life has become increasingly challenging in the last decade in



By tapping on the orange button, new users will redirect to the registration page

Sign up

Lucia Bianchi

+48 12345678

lucia.bianchi@email.com

My profile appears in search results

I accept the Terms of Use and the Policy in regards to the treatment and use of my data.

Do you already have an account? Log in

0

💎 🔺 🛢 12:30

Mobile 🔽

Group Star

About the group

for their chidlren.

The group Group Star involves some members of

It provides a way for parents to share childcare

the research center Star in northern Italy

REGISTRATION



- In order to sign up, users need to
- fill the form (by adding name, email, password and, optionally, a phone number)
- state whether they want their name appearing in search results;
- Agree to the terms of use and privacy policy.

Instead, if they are already registered, they can tap the link before the form.

Terms of use





PERSONAL AREA

Only after sign up / log in, the user is inside is personal area, where several elements can be found:

- Personal calendar: it can be expanded to show all the days where the user or his children are involved in some way;
- Personal groups: these are the groups to which the user belongs. New notifications of the group are alerted thanks to the coloured circle and the number relating to how any there are.
- Personal notifications: here there will be displayed notifications such as invites or pending requests to join a group, the admittance of a new member into one of the personal groups and, if administrators, requests to join one's group.

By tapping the hamburger menu, a navigation drawer opens, displaying several actions.



User notifications in the personal area

A registered user can receive the following notifications in the personal area:

- a new member joined a group that the user is part of;
- the state (pending, accepted, rejected) of an invite that was sent from the user to a friend;
- the invite to join a group. The invite can be sent from a group administrator to the user, offering the possibility to enter the group. The user can browse the group description presented in the "About" section and accept the invite;
- the status of a request of the user to join a group which is has not been approved yet and, thus, is still pending;
- the approval or rejection of the user to join a group from the group administrator(s);
- the request to be the administrator of a group the user is part of;
- the approval or rejection of an activity created by the user in a group;
- the notification that a parent/guardian was added to a user's children profile.





NAVIGATION DRAWER



From this navigation drawer, the user can reach several pages dedicated to the:

- personal profile; .
- . creation of a new group;
- search of groups;
- Invitation of friends; •
- . Frequently Asked Questions (FAQs);
- Information about the project.

It is also possible to sign out from the community.

FAQ SECTION

÷

.

+

Q

+**

0 FAQs

0 About

 \otimes



In this section, users can visualise the frequently asked questions and find answer related to several practical topics





PROFILE AND PRIVACY

The profile is dived into three tabs:



Here, information about the user are present both personal and whether he/she covers the role of group administrator. It is possible to modify the profile by tapping the pencil icon present in the upper part of the screen.



Here, the children of the user are present and, thanks to the Floating Action Button (FAB) is possible to add a child. It is possible to modify the profile by tapping the pencil icon present in the upper part of the screen. FAMILY AND FRIENDS (FRAMILY)



Here, the members of the user's network of family and friends are displayed. It is also possible to invite more friends thanks to the FAB. It is possible to modify the profile by tapping the pencil icon present in the upper part of the screen.



By tapping the more icon next, a menu appears that allows to:

- Export all the data present in the profile;
- Delete all the data to preserve privacy;
- Sign out.

6.2.2. Creating and managing groups

The table outlines the requirements related to creating and managing groups within the digital platform.

ID	Requirement	Description	Group	Priority	
1	Website for each community	Each community has a website as companion of the app (each CityLab can have more than one community) Perhaps we could use second level domains for these (e.g. trento.families-share.eu).	Website	High	
2	Website shows the list of groups for that community (as in Cokido)	s the list of t in Cokido) We can create an endpoint within the app that returns information about public groups. So the website could be totally static, apart from the content shown from that endpoint. That way one could browse some public groups and perhaps see photos, just like in Cokido. If they click on the group however, they will need to download the app and register.		Low	
3	The app has different instances	Each community will have its app to download from the Google Play Store (android first and then iOS later on)	General	High	
4	App design is mobile first	The interface will be designed mainly for mobile phones but it can be access also from the web (for iOS and web users)	General		
5	Search group	Users can search for groups from the web page or from the mobile app	Search	High	
18	User hierarchy	Community manager <- Group administrator <- User	User categories	High	





		(parents / professionals) <- External [i.e. person not registered in the platform] This means that the community manager is inherently a Group administrator for all groups The Professional is a user role that has certain permissions.		
19	New member notification	When a new member enter a group all other members are notified	Notification	Medium
20	New member acceptance rule	Two options are provided: Strict : all members (who are also group administrators) they have to agree to the new member Flexible : at least one group administrator agrees	Group management Community management	High
22	Community default options	Community default Options when you create a community: • New members are automatically administrator OR not • Approval for new members: Do all group administrators need to agree? Or just one is fine? (i.e. AND or OR). [see #20] Group can change this option or not		Medium
23	Community access option	The community can be open or not	Community management	Medium
24	Group settings when creating a group	A group can be visible or not visible: that is a group can be searchable or not. If it is visible, an external user can contact the group administrator for joining the group	Group management Privacy	Medium
25	Join a group with an invite	All groups are invite-only. Some are visible and some are not. If it is not visible you have to receive an invite by the group administrator to join in. If the group is visible, you can contact the group administrator to receive an invite.	Group management	High
26	Type of notifications	Members and group administrators should receive notifications. System event notifications e.g: - "a new user entered the group" - "a new activity has been created' - "the agenda for a specific activity was closed" The notification can be sent in the phone or by email	Notifications	High
28	Professional users	Professionals can be invited by group administrators. They are users and can access information related to the activity in which they are involved OR we can keep as it is in Cokido (information provided in the activity by the group administrator)	User categories	Medium
30	Types of activities	The interface should support activities that have two characteristics: - Recurrent vs One-time - Flexible vs Fixed User should not categorize the type of activity, this can be automatically inferred by the system	Activity management	High
31	Promote groups and activity	We should provide indications or material for supporting the promotion of groups or activities (flyer, social media material, etc)	Group management Activity management	Low





34	Starting page / Homepage for new users	Information displayed to the users when they access the platform: - Login Registration form - Info on Families_Shares project - Info on active groups	Interface	Medium
35	Starting page / Homepage for registered users	Information displayed to the registered users when they enter the application: - Calendar - Joined groups - Notifications	Interface	Medium
36	Provide checklists	Provide users with checklists for supporting some activities (WhatsApp group creation, financial rules, etc.)	Interface	High
39	Support communication within and outside the app	Communication can be supported within the app (announcements / message) or outside (WhatsApp/telegram/facebook). This can be decided by the community manager.	Communication Community management	Medium
40	Announcements (a.k.a. Messaging) feature	Kept as they are in Cokido (basic) but call them Announcements and have it for informing group members This can include also info for support the group to manage a whatsapp / telegram group Users should be able to post message and give replies	Communication	High
41	Edit announcements / replies	You can edit announcements or replies (created by you)	Communication	Medium
42	Deleting announcements / replies	You can delete announcements or replies (created by you)	Communication	Medium
44	Images in the announcements	Announcements can include an image	Communication	Medium

Table 4. Requirements related to creating and managing groups

Based on the requirement, the following wireframes for search and create groups were elaborated.





SEARCH AND JOIN A GROUP



After tapping "Search a group" in the navigation drawer, a user can search groups by typing either its name, city or post code.

GROUP SECTION

the personal area.

picture, they can tap the button "Join Group" to request

access and then await the notification of admittance in

Once a member of the group, all the four sections are equally accessible to the user thanks to the bottom navigation menu, that is:







GROUP - NEWS

The "News" section is composed of two tabs:

NOTIFICATIONS Notification Group Star NOTIFICATIONS (3 New activity! The group have orga ed a new activity for the Hello there! ely "Summer Camp" from August 5th to 11th. Group Star welcomes you into the group. As of today the participation is open to interest-New activity! ed members. The participation is open for the new activity nmer camp Group rules The group follows some specific rules. LEARN MORE \sim 6 0

The user will receive all notifications pertaining the group only, such as the creation of a new activity, the admittance of a new member...etc.

GROUP - MEMBERS



In this section, all the group members are listed in alphabetic order. For each member it is possible to contact them either via phone or mail or both.

The administrator(s) is distinguished with a label and a orange star to denote his/her role.

In the About section, a list of cards display or link to information that could be useful to the user, that is:

- Information about the group;
- The rules of the group agreed upon by all members;
- A 7-steps start-up guide for new users.

This is the first page a newly accepted member will see when entering the group as to discover more about it. Afterwards, the first section upon access will be "News".

MESSAGES



Messages can be exchanged on a wide variety of topics related to the group. The FAB allows the user to write a new message.

GROUP - ABOUT







GROUP - NOTIFICATIONS



The notifications related to a group are displayed as shown in the picture (i.e., number and circle) in the start page.

Moreover, when inside the group, a similar badge positioned on the right upper corner of the icon of the "News" section calls attention to the unread notifications.

Group notifications in group start page

These notifications are strictly related to the group activity, including:

- visualizing group rules (only present in case of first access);
- a new member has joined the group (with information on the name of the new member);
- a new activity has been created;
- the agenda of a particular activity has been closed;
- the agenda of a particular activity has been locked;
- an activity has been deleted;
- a timeslot in which the user has signed up has been confirmed / deleted;
- a new group administrator has been added.

Notification badges are present to call the user's attention to new notifications. The notification badges are displayed in the personal area (a badge for each group) and in the icon related to the "News" section in the bottom navigation menu inside a group section.





NEW GROUP CREATION

Four steps are necessary in order to create a group:

✓ ∠	▼ ∠l	90 💌 🗐 🖹 13	230 🗸 🖌 🖬 1230	÷
Create group	← Create group	← Create group	← Create group	Red Devils
Provide a name and a description Film Red Devils Construct Construct Control Control Control Control Control Control Set the viability Provide the location Invite people	 Provide a name and a description Red Densis Set the visibility Others can find my group ContINUE CANCEL Provide the location Invite people 	Provide a name and a description Red Dense Set the visibility Provide the location Identity Trento Contraute CANCEL Ninte people	 Provide a name and a description Red Devide Set the visibility Others can had my group Provide the location Tento Provide the location Provide the location Provide the location Contract 	About the group Lets organize some fun summer activities our little red devilst!! All parents are welcome to contribute!
rovide name	Set the visibility	Provide location	Invite people	Revo Activities Unerdees

6.2.3. Creating and managing activities

ID	Requirement	Description	Group	Priority
45	Activities are mapped in a collection of timeslots	When you create an activity you set a time range (and this can be edited) and define time slots	Activity management	High
46	Timeslots have counters	Users should be able to mark their availabilities and their need for each timeslot Counters can represent volunteer availabilities AND needs (children)	Activity management	High
47	Propose different activities	Users should be able to propose multiple activities for the same time slot	Activity management	High
48	Problematic timeslots	Users should be able to see time slots that are problematic (when the minimum number of volunteers or children is not reached, or when there is an unbalanced ration between volunteers and children, etc) Using different colors to signal problematic and non- problematic timeslots	Activity management	High
49	Export agenda as XLS	Export an agenda with all activities in the group calendar for supporting discussion as XLS file (plugin)	Activity management	High
50	Calendar view	Users should be able to see calendar with: - PERSONAL VIEW: the activities in which you are involved, and your children is involved in - GROUP VIEW: all the activities of that group	Activity management Calendar	Medium
51	Toggle Calendar / List view	Users should be able to toggle view as calendar (month / week) or as a list (a list of timeslots)	Activity management	Medium

The following table outlines the requirements related to creating activities.



V 🖌 🛔 12:30



			Calendar	
53	Set constraints/ variables for slot confirmation	When creating an activity set the minimum number of children or volunteers required for each activity	Activity management	High
54	Who can propose an activity	Every group member can propose an activity and a group admin (just one) should agree	Activity management	Medium
55	Who can modify / confirm and close an activity	Only group administrators can modify or close or delete activities	Activity management	High
56	Activities detail	When you create an activity you define the title and the timeslots. Activity description, location, cost and image are optional.	Activity management	High
32	Evaluating an activity	When closed, activities can be evaluated by their members (e.g. with a questionnaire, a summary of the activity, a checklist)	Activity management	Medium
33	Sharing knowledge	Once finished, information on activities and groups can be shared within the community through the website	Activity management	Low

Table 5. Requirements related to creating and managing activities

The following wireframes visualize the interface features for proposing a new activity within the application.

CREATE A NEW ACTIVITY

				▼⊿ 🗋 12:30	
	×	N	ew activity		
Tapping the FAB, the user can	0	Infor	rmations		
to the group members.		Ŷ	Name of the activity	/	In order to create a new activity, the user is guided through three steps:
		9	Location		
4	8	ŧ÷	Required parents	OPTIONAL	#1
		٢	Required children	OPTIONAL	i Informations The user enters basic information on the
		₹	Description	OPTIONAL	activity such as the name, the location, the minimum number of participants and a color to recognize it in the calendar. Moreover, a
		\$	Cost	OPTIONAL	description and a cost can be optionally added.
		۹	Color of the activity	Ŧ	
				CONTINUE	
		Date	95		



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



						▼⊿	12:30
×	N	lew a	ctivit	y			
0	Info	rmatic	ons				
Ē	Date	es					
	Sele	ect one	or more	e days			
	<		Au	gust 20	18		>
	S	М	т	W	т	F	S
							1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30						
						CONTI	NUE
C	Tim	eslots					



C Timeslots

The third step concerns the timeslots. The user can define the timetable of each day entering start and end time of the slot. Adding a new timeslot requires entering the time through a time picker.





📩 Dates

In the second step the user choose the dates in which the activity will take place. One or more days can be selected by tapping on the calendar.







This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



EDIT AN ACTIVITY



Before, but also after creating the activity, the user is free to go back to the previous steps and modify them.



6.2.4. Time and availability management and scheduling

The table below outlines the requirements related to time and availability management.





ID	Requirement	Description	Group	Priority
57	Timeslot informationSlots display the activity name, you can add a description, the have a counter for participation and a counter for children registered to that activity		Activity management	
58	Professionals and timeslots	If a professional is involved, he/she can be added in the time slot detail (by group administrators)	Activity management	High
59	Information on a timeslot	meslot In a single time slot you can define the location and the description		High
60	Apply changes to activity time for all the time slotsUsers should be able to modify time for multiple time		Activity management	Medium
61	You can duplicate a time slot (for recurrent events)Repeating a timeslots means repeating for a week/month/ same days		Activity management	Medium
63	Calendar in the homepage with commitment and fixed slotsA calendar showing all the activities in which I am involved (confirmed or open) or my children (confirmed or open) is displayed in the app homepage		Calendar	Low
64	Calendar with colors The color represents time slots (days or weekly) colored if there is an activity for me / or my child(ren).		Calendar	Medium

Table 5. Requirements related to time and availability management and scheduling The following wireframes described the functionalities for providing availabilities for the group activities.

SIGN UP FOR A TIMESLOT

					▼⊿	12:30		
÷	Grou	p Sta	r					
<		Aug	gust 20	18		>		
S	М	т	W	т	F	S		
						1		
2	3	4	5	6	7	8		
9	10	11	12	13	14	15		
16	17	18	19	20	21	22		
23	24	25	26	27	28	29		
30								
Activit	Activities of this group							
at .	• Tuesday after-school Confirmed activity							
•	Summer weekend Waiting for confirmation							
-	Maatir	nae at	tha na	rk				



The calendar shows the days in which one or more activities occur. Different colors represent different activities. By tapping on an activity, its details and timeslots can be modified.









INTERACT WITH THE TIMESLOTS





This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



6.3. Interactive prototype and design specifications

At the following links we posted videos of the interactive prototype for presenting the main features of the Families_Share mobile application:

Interaction Video	Link	Description
Registration	https://drive.google.com/open?id=1W 4YR0IVAnFkqkZIWrpcJ6zsiQfgpe9qC	The video shows the landing page, with information on the project, and the sign up process
Login	https://drive.google.com/open?id=1V mbpv2GxSqZbeiR22ZGubjF8VspkZkWb	Log-in process and homepage
See/Edit your profile	https://drive.google.com/open?id=1SM OfAthmNu6HfpfmSWR4qcXIbmfChAAk	The video shows how to see and edit the personal profile
Add/Edit children profile	https://drive.google.com/open?id=1z4 CkTSk4VlwewGCD3Uog83qEEhafT-3b	The video shows how to add and edit information about the children
Search a group	https://drive.google.com/open?id=17b P1fj02BZNYVDLcM-zjwicLL624FYvH	How users can search for public groups and ask for invitation
Create a new group	https://drive.google.com/open?id=1hT 55ioge8v5z9AhjQ7hTOKusFLCgZgSF	The video shows the process of creating a new group
Receive a notification/message	https://drive.google.com/open?id=1HI 4JjslUOyZp1g02XTg3M48VywDV0dn1	From the group page the user can read notifications and messages, and other information related to the group
View the calendar	https://drive.google.com/open?id=1eD 6ly22kmZa854MDHr7IKHZh1CNGjTaJ	Users can change the view of their calendar
Create an activity	https://drive.google.com/open?id=100 8hCXjPywuUm94BMFWi3Hix2UDbOU	The video shows the guided process of creating a new activity and selecting time slots
Views activities and time slots	https://drive.google.com/open?id=1wS Gfexoh6bNWhOHoTJLKaaXTGJ0e02jr	Users can visualize their calendar and a list of timeslots
Give availabilities	https://drive.google.com/open?id=1qa KRyMJby4JkKbhcJDY9seQoMSY_rlgV	The video shows how users can indicate their availabilities or register their children to an activity

The interactive clickable prototypes (e.g. Figure 15) and the design specifications (e.g. Figure 16) can be accessed through these links:

Prototype features	Interactive Prototype	Design Specifications
Registration, user profile, creating and managing groups	https://xd.adobe.com/view/1be5a021- 7f88-4dfc-4511-f90fd0fde495-6dd4/	https://xd.adobe.com/spec/fd22268c-60c7- 4508-777a-e831b169dcdd-8b13/
Creating and managing activities, time and availability management and scheduling	https://xd.adobe.com/view/f28016f3-0d45- 4cc3-5106-51a287603120-84b1/	https://xd.adobe.com/spec/3c57ad0a-4fda- 495c-7c69-c29d59c596b4-4a66/





Families_Share Mobile DESIGN SPEC • 52 scree	ens, Aug 13, 2018 11:41	AM						Q Search		46% ✓ Sign In
Start_Homepage	Sign up	Log in	HomePage_Lo Menu	User profile	Edit user profile	Add child screen	Children profile	Group	New group - St	Search group
e tamlies	Barran and Anna and	teres	The second secon	Lucia Bianchi	tuda Blanchi	And cold and and and and and and and and and an	Gabriele Bianchi	Group Star	Count group Count group Transfer A starting and Secure	
ADSVEDUE DE DEVEKT	Free Series carried	Freque Facement () (Al-10) (Al-10) (Al-10) (Al-10) (Al-10) (Al-10) (Al-10) (Al-10) (Al	Break Inst. Menn	Mill Date/All Case/All ·	Internet Internet Internet	All such of long to the subset of the subset	Margh 100, 2000 Margh 100, 2000 Margh Langert	An annual cana any annual an annual annual an annual an annual an annual an annual an annual an an an annual an		0 ==== 0 =====
Statut Statut Statut Statut Statut Statut Statut Statut	Android Mobil	Android Mobil	HomePoe ex	Android Mobil	Android Mobil	Add child 1	Android Mobil	Android Mobil	o Step 1 (part 2)	Digit search
Android Mobil	Spring	 Lago Lago Second Appendix on Assessi 	control (1) contro (1) control (1) control (1) control (1) control (1	Lucia Blanchi	A Lorde Binnchi			A state A	Chain grad Chain grad Chain grad Chain grad	P Spail B 0 mm 0 mm<
About the project Index source resources are an intermediate index sources requests are intermediate index and an intermediate are and an intermediate index and an intermediate are and an intermediate in a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a source of a prior to a prior to a prior to a prior to a source of a prior to a prior to a prior to a prior to a source of a prior to a prior to a prior to a prior to a prior to a source of a prior to a prior to a prior to a prior to a prior to a source of a prior to a pr	basi Persent Justit servert	Farget Parsentif Ok. (2) (1) (2) (2) Ok. (2) (2) (2) Ok. (2) O		Reference Construction	-	And equality information a.g. trade travelenges and the second	Ari Andra da angles Ari Andra da angles Ari Malanderana	Keen activity: Presented on and the free second s	Letter appears over followerse en en e	********
rapidancia na regularización anterio sel unitario sumo y sumo quiente quiente su dan sano- nare ad allo reconstrucción y antera de la adversión anteriorista y antera de la adversión anter constru- ción y anteriorista y anteriorista y anteriorista y The chandrange anteriorista y anteriorista y formany en est a cató y fin has becomes la asserta y construcción y anteriorista y anteriorista y la asserta y construcción y anteriorista y anteriorista y anteriorista y la asserta y construcción y anteriorista y anteriorista y anteriorista y la assertación y anteriorista y anteriorista y anteriorista y anteriorista y anteriorista y la assertación y anteriorista y anteriorista y anteriorista y anteriorista y anteriorista y anteriorista y la assertación y anteriorista y an	Android Mobil	Android Mobil	Banking Arrowski	Android Mobil	Android Mobil	Add child 2		Android Mobil	e e Step 2	Search result
Dep The second		Laget	(mar Add	Lupia Blanch	Luda Bjanchi	Tanan kara Tanan kara Tanan tanan 4 Tanan 4		Compliant	County process County process County process and a description More country County process County process County process County process	e grup Har X North Management Hardware Management Hardware
In the Sale gamma between the second	and Second	Engel Panaser® (#1-28-0 #171- 2000)		Contractions	International International International International International	Aff guide viewages registeristeristerist Conserver for the formation and and it heads		Transmission can be a set for the second state "Series can" Concept fuller The proof before cars works rate.	 Provide the constitute Sector associate 	
and drawn water of an analysis theory official, and drawn more variants. The Familiery Statements The Family, that paper offices before a solution of the family and official before a solution of the family and the solutions of polyhology and the solution and the all a drawn and the betoen water solution the solution and the theorem and the	Android Mobil	Service a constitution		Modified profile		Add child 3		Android Mobil	Step 3	
Made				Luçia Blanchi		Sama Kana Kana Kana (a), ang Kana Kana Kana Kana Kana Kana Kana K		Group Star	Create proc Create proc Create proc Decision events and a discretation Decision events	~
independent performant og stor sampling gefor et genanter med itt serborale	Thursday			·		12 Inclusion			 Provide the function 	

Figure 15. Visual representation of the interactive prototypes (created using Adobe XD)



Figure 16. A screen from the design specification generated in Adobe XD







Figure 17. Screenshot of the interactive prototype from Adobe XD for the activity scheduling task





Some visual mockups (Figure 18) were created to get a general idea of the final application and to better visualize how the application would appear on the device.



Figure 18. Mock-ups of the Families_Share application

7. Conclusions

This deliverable has provided:

- an analysis of digital application for childcare management and group time scheduling;
- the description of three usage scenarios and the result of a collaborative experience of the Cokido application;
- a list of requirements and a task flow map based on needs and experiences collected in the seven CityLabs;
- mockups, wireframes and interactive prototypes of the Families_Share platform detailing the features and the interaction that should be supported within the application.

This material provides a basis of communication and a source of clarification that will inform and guide the Families_Share platform and mobile services development.





References

Cao, J. (2017). A Practical Look At Using Wireframes. Retrieved from <u>https://www.uxpin.com/studio/blog/practical-look-using-wireframes/</u>

Carroll, J. M. (2000). *Making use: scenario-based design of human-computer interactions*. MIT press.

Johansson-Sköldberg, U., Woodilla, J., & Çetinkaya, M. (2013). Design thinking: past, present and possible futures. *Creativity and innovation management*, *22*(2), 121-146.

Knapp, J., Zeratsky, J., & Kowitz, B. (2016). *Sprint: How to solve big problems and test new ideas in just five days*. Simon and Schuster.





Annex

Annex 1. Scenarios presentation





At the workplace, Lucia is at her desk, working on a project that has to be completed by the next day.

In that precise moment, she hears two colleagues discussing about an online platform for organising activities for their children when the school is closed. This platform is called Families_Share.





🖳 👘 👘

:=

HOME

.....

























This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



Annex 2. Cokido experience material



We kindly invite you to participate in an internal test and co-creation exercise around the COKIDO application with all consortium partners. This exercise is specific oth online and offline) and features of arranging childs burney that is stipulated in D1.1, and describes a user so io but comes close to reality about how parents curren range the activity, how they prepare the agenda, etc.

- complete the exercise, please execute the following steps by 17/7 (before you leave to Veni 1. Check in which community you belong. There are two groups: the "Red devils" and "Disi
- Check which role you have, and how many children. There are for responsible person for the playing material, (iii) responsible person playing parent. If you are assigned to be the coordinator of the co on the COKIDO application than others.
- Execute the tasks in the scenario. Go to the scenario of your corresponding group, and complete the tasks that an written in the last column. For registering on the application, you can check the document "Coloridogy_BegisterManual". To complete your actions on the application, it might be that some actions have to be completed by other Stat. lete the tasks that are



COKIDO - co-creation exe

are finished with all the tasks (it might be that you are relian rs), please complete the feedback form and send it back to rij.be and carina werdman mina - to

aric

on the COKIDO application (as some screens are still in Dutch): <u>http://bit.ly/2JbvtKd</u> ng group I 'Red Devils': <u>http://bit.ly/2KXVK3r</u> ng group II 'Disney World: <u>http://bit.ly/2KXVK3r</u>

g is also available on the team drive > De Stuyverij > COP

Nr.	Participant/ parent	Children	Bale
1	Chiara Leonardi	Child 1: "Toby" – 3 years old Child 2: "Michy" – 5 years old	 Coordinator of the community: creating the group online Creating the childcare weeks online Responsible for financial management Responsible for checking filled in slots for the agenda, and closing the agenda Responsible for adding "babyuitters" or "transhy" for open slots Co-sloving parent
2	Massimo Zancanaro	Child 1: "Laurent" – 4 years old	Responsible for the playing material Co-playing parent
3	Agostino Cortesi	Child 1: "Dries" – 6 years old Child 2: "Eden" – 7 years old Child 3: "Jan" – 10 years old	Responsible for the management of the location Co-playing parent
4	Carina Veeckman	Child 1: "Marouane" - 7 years old	Co-playing parent
5	Maria Sangiuliano	Child 1: "Kevin" – 7 years old Child 2: "Thomas" – 5 years old	Co-playing parent
6	Niels Kinds	Child 1: "Thorgan" - 6 years old	Co-playing parent
7	Apostolos Vontas	Child 1: "Lukaku" – 7 years old Child 2: "Vincent" – 8 years old	Co-playing parent
8	Eefje Cottenier	Child 1: "Axel" - 8 years old	Co-playing parent
9	Khadija Ouchoukout	Child 1: "Thibaut" - 10 years old	Co-playing parent

fo	milies hare	COKIDO - co-creation exercise	
Nr.	Participant/ parent	Children	Role
1	Manolis Falelakis	Child 1: "Anna" - 3 years old Child 2: "Eise" - 5 years old	 Coordinator of the community: creating the group online Creating the childcare weeks online Responsible for financial management Responsible for checking filled in slots for the agenda, and closing th agenda Responsible for adding "babysitter or "framily" for open slots Co-playing parent.
2	Karolina Czako	Child 1: "Tinker bell" – 4 years old	Responsible for the playing materia Co-playing parent
3	Popi Sourmaidou	Child 1: "Donald" – 6 years old Child 2: "Goofy" – 7 years old Child 3: "Pluto" – 10 years old	Responsible for the management o the location Co-playing parent
4	Marzia Cescon	Child 1: "Aurora" - 7 years old	Co-playing parent
5	Eline Charles	Child 1: "Winnie" - 7 years old Child 2: "Tigger" - 5 years old	Co-playing parent
6	Mpampis Chatzimallis	Child 1: "Mickey" - 6 years old	Co-playing parent
7	Marie Schulze	Child 1: "Cinderella" – 7 years old Child 2: "Belle" – 8 years old	Co-playing parent
8	Annelies Maertens	Child 1: "Jafar" - 8 years old	Co-playing parent
0	Mathia Casula	Child 3: Climber 10 upper ald	



COKIDO - co-

User scenario GROUP I: "RED DEVILS"





COKIDO - co

are				
and the second second	 			

CONFIGURE E	w community	CONFIGURE THE COMMUNITY	ACTIONS ON COXIDO
A community mani comm	iger configures the	In May 2018. Making get newtar with the COLO exploration whose two and wick of the magnetine, and available loarn many about 8 means danse the unitate programmer of the COLO particules, mean Redetto. During charanger of the COLO particules, mean Redetto. During their rest appointment, Babeto explored and the plates or dimensioner (1600m, and height danses), with share the state of the state of the state of the dimensioner of the state of the state of the state of the state of the state of the state of the state the state of the state of the state of the state of the state dimensioner of the state of the state of the state of the state of the state of the state of the state of the state dimensioner of the state of the state of the state of the state of the state of the state of the state of the state dimensioner of the state of the state of the state of the state of the state of the state of the state of the state of the state of	 Massimo registers on the COKIDO application, are fills in the profile details
	OVER	DISCOVER NEEDS	
Parent has a need Discovers families- share		At the end of May, after the football game of his son Michy, Massimo taiks to other parents, being Chiara and Agostino, at the local football club in their village. He hears that they are looking for childcare during the summer period, as summer common an become nutries executive. Maxime availables them	Chiara and Agostino register on the COKIDO application, and fill in the profile details
Download applica	ition and register	Compared Sectioning update Exploring Handamore Explorer these the idea of CORDO and tells that when he will first the tell home from the football club, he will send a website link to Chiara and Agostine to have a look at the CORDO application. After downloading and registering on the application, Chiara and Agostine line the idea, and agree to form a core group with Massimo to self-arrange childcase during the summer holidays.	devis's group Chiara and Agostino become a member of the "Red devils" group

riods for the RED DEVILS COMMUNITY





			To form a group, they need to look for other parents, as the group should construint and granets. Massino, Olava, and Agnitties decide that after the next football game of their sout, they will list other parents and should them users a them form. The core group and have downloaded the application, and filled in all profile decides the parents' profile, and the hidt profiles. Further, as group coordinated, Massino Caracita due group, and Agnitism of Massina of Much Olara and Agnitism are the "rist members. Dalara and Agnitism could fille the field resign protocybult the south of the south of the theory of the south of the south of the south of the south of the theory of the south of the south of the south of the south of the theory of the south of t	
GRO	UP MEMBER	SHIP	GROUP MEMBERSHIP	ACTIONS ON COKIDO
Join a group	Create a group	Receive an invitation to join a group	Tabler the next finishing given in some, Oblack Massims and Appention sith to Carlson, Maria, Neika, Abacatos, Berlay and Bhadliga neh carlson at all next shall be abler three in site to mit provide the standard standard standard standard standard provide the standard standard standard standard standard standard standard standard standard standard standard Maria, Marki, Appendicka, Edif and Abadliga to join the well between the standard standard standard standard Markin Markin, Appendicka, Edif and Abadliga to join the well and adverses, Marking and Standard Standard Standard Marking and standard standard standards. After entire gain and adverses, Marking hay and standard hay and standard and adverses, Marking hay an annual standard standards.	 Massimo invites Carina Maria, Niels, Apostolos Eelje and Hudiga via telui email to join the 'Sec denkir group, Maria, Niels Apotolos, Folje and Khadiji accept the invitation of Massimo and register or the COKIDO application Carina, Maria, Niels Apotolos, Folje and Khadiji complete the profile

			Carina, Maria, Nels, Apostoles, Eelje and Dhadija open their malitos (check: spanl) and see that they have received an invitation from Massimo for the group 'iked Devid', They accept the invite and download and register on the COXDO application. They Ilin all the positio deatal about themeekes and their children. They see in the application that there are members of the group 'iked Devid'.
			GROUP LIFE OFFLINE
First members in meet offline pa	vite other articipants en an activity	Negotiate agreements v	Maximo, as proor concluster, site way as Whetesog prove to the two black with coreining all the place multism that the method of the second second second second second second end or set of anyone right result, the tests the group for an end tests that the second second second second second second second second second second second second second tests "Prior second second second second second second second

nare	CURDU - co-creation exercise
	person. Massimo will be responsible for adding this tenth person into the system, this can be another family from the football club, or a grandparent, or babysitter who can cover the needs on a specific day.
	Applicities who is responsible for the management of the baseline, which the parents have hardware here the horizon they found more studied to arrange the childrane activities. From Roberts, the community mange of CODO, they recorder spon errors and applications of arrangements for hardware horizons. The parage discretion that they and any the parameters that hardware more of the childrane ga, for using their classroom during the more of the childrane ga, for using their classroom during the terms is built of particular the parager states and the parameters then by any discretion of the parameters of the childrane of the parameters are states of the childrane of the CODO application with the specifics about the location, such as "remays, the last the khickling childrane of the CODO
	Agenesies win provide the memory measurement of the disconstant. Children win is responsible for the playing measured, also questions the parent of they could flow galaxies are try per tends from a second second second second second second can be never an of second segme material. After the meeting, Children also posts a message on the discloberard regarding the playing means, do in the question do are flowed hand there is more than the second second second second second second second means and the second second second second second second means and the second second second second second second second second seco

		CREATE AND MANAGE ACTIVITY	
Create an activity	Set activity requirements	New the planning in made, Makaline enters the particuls for August, times (2004) and then easily collode - 122-00 and 123-01 - 127-03, is defined and the group conditions: start and enters (times but). It is allowing on the start of the start partner for our day (plane & children / parent).	Massimo creates the period in the agend, "20/8 to 24/8 and fills in all the settings: start an end siots, and maximum amount of children pe parent. Massimo enters his availability and needer child care days for his children
	INATION & PARTICIPATION ANAGEMENT	GROUP COORDINATION & PARTICIPATION MANAGEMENT	
insert avallability as volunteer	Insert participation of number of children	Agention, Dhiang, Carina, Maria, Neth, Agentelos, Helfa and Madaliga Dakachine In the COECO Deplatation and enter their availability as a co-planying parent, and insert. the participation of three challens in the respective socied days. The Markowski and the second participation of the second participation of the second second participation of the second second participation with the exception of one specific day for which a parent is locking. Therefore, Manime parts amongs on the calabased Markowski and the institute on any second second second participation. The Markowski and the second second second second participation of the Markowski and the second second second second second second second parents. The second second second second second Markowski and the second s	ALL: everyone clicks or the period "20/8 to 24/8" to participate. ALL: everyone enters hi availability as co-pleying parents, and for which days child care is needed Check the Google exec sheet: <u>http://bit.y/2XXXLS</u> Massimo posts a message on the dathboard to aix



families

COKIDO - co-creation exercis

User scenario GROUP II: "DISNEY WORLD"







COKIDO - co-creation exercise

		CONFIGURE THE COMMUNITY				
A community	manager configures the community	In May 2018, Maria got familiar with the COBO application when the size an actice about it in any approximation and water to learn more about it. She works down the contact details the COBO application, named Walk, During ther from the COBO application, named Walk, During ther from Applications of the subject of the downloading and registering on the subject Maria with downloading and inducers for creating on manage groups, After this context, pain. She also received some bruchwes from the community manages to distribute to interested parents.	Marie registert on the COKIDO application, and fills in the profile details			
		DISCOVER NEEDS				
Parent has a need Download	Discovers families-share	At the end of May, when Muleic cores to pick up her disapters Ama and Bias at the choice gain, the tails with some other parents, being Ravins and Poj , about the arrangement of choice and unique much. The mothers say, that they are looking for alternative childrand during the lammer princip, as summer campa the becoming quick expension. Multie explains from the load of COMDO and this lists to Raving or Poj (a) here a boot at the Opplication, Karling and Poj (b) here a boot at the OSI application. After diversionling and registering on the application. After and Poj (b) here a	 Karolina and Pop register on the CORIDO application, and fill in the profile details Marie creates the "Red devils" group Karolina and Popi become a member of the "Disney workd" group 			





			Tom a core group with Marks to a difference production during the summer holding. The form a group, there well to look for other parents, such a group, should constit of minimum 10 senses. Names, Schwarz Boston and Ward Steel St		
GROI	IP MEMBERS	HIP	function, and by clicking 'participate in this group'. GROUP MEMBERSHIP	ACTIONS ON COKIDO	
Join a group	Create a group	Receive an invitation to join a group	During the week parent's county meeting. Marks. Rooting and Park Link Marks, Biour, Mayang, Marks, Annelles and Mattia about their lates to simplify the late to be also and the source of particular to the source parent. They are the arrange of lates and the source parent. They are the lates the arrange of lates and the source parent of the lates the be- arrange of lates. Marks and a source barrow there is the Marks gapes in the mean "member", and class "member" Marks gapes in the mean "member", and class. "The mean addresses, Marks and nearcow the lates have have and addresses and the source have been addresses and marks gapes in the mean "member", and class "member" and addresses. Marks and nearcow of the lates have have	 Marie invites Marzia, Eline Mpampis, Manoli Annelies and Mattia vi their email to join th Dinny world group Marzia, Eline, Mpampi Manolis, Anneles an Mattia accept th invitation of Marie an angister on the COKIDI application Marzia, Eline, Mpampi Manolis, Anneles an 	

			secretor the invitation (ar not). Maria, Elice, Magnis, Manelia, Annelies and Mattia open their malibor and see that they have received an invitation from Maria for the group "Disray work". They accept the invite and download and register on the CDODO application. They fill as all the profile details about themselves and their childrens. They see in the application that there are members of the group Disray work?	Mattia complete the profile details
		4E	GROUP LIFE OFFLINE	
First members meet offline	Invite other participants	Negotiate agreements	Multiple, as provide reservicing, who rests up a Winkstage group for the "totake work" group by releasing all the phone numbers that she found online is the profiles on OCX000 (this is follow and descent enter for happen rights real). She tests the group for an efficie invitation to meet up and to settle all the arrangements. She tests "first colinie meet up, now Wedendedy 13/7/2018 at 14 or 4/col, at the turven close to be school to discuss the perschaftler for arranging child care	ALL: have a look to the planning that was made offline during 15/7/2018: http://bit.hy/2L0x8liw Karolina posts a message on the dishlopard of the
[m	sion an activit	Ŷ	In summer ⁴ . The parents all affers that they will core. During the meeting they discuss for which periods in July and August they have the most pressing need to self-arrange child care, they also exchange their availabilities: when are the parents able to capilar, and at which moments should child care be provided. As study, the first steps of the planning are made offline, althereby it is discided with weeks in July and August will be choires for arranging child care, and who is a parent can be available. Since they are with a group of	group about the location: e.g. Primary school Saint Nicholas Saint Nicholas street 5 Gent" • Popi posts a message on the dashboar about the playing material

nare	
	Intergenerati, it is also still necessary that they loss for a tenth person. Mutic will be reported for a dadge to tenth person into the system, this can be other parents from the school, a grandparent, or a ballystiter who can cover the needs on a specific day.
	According against a responsible result of the first sector of the sector
	Papi, indu is reasonable for the ploying meterial, also questions the parents if they could framp along one tray par- child for the childcara activates; or if they know someone who can horrow or downa playing mitterial. All the the mete- ue, Papi alon posts a message on the dashboard magning the playing material, on the parenti do not funger along their the playing material, on the parenti do not funger along their the playing material. Some parents are set to play along their the playing material, on the parent do not funger along their the playing material, on the parent do not funger along their the playing material, on the parent do not funger along their the playing material, on the player along their their the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player the player along the player along the player along the player along the player the player along the player along the player along the player along the player the player al

		CREATE AND MANAGE ACTIVITY	
Create an activity	Set activity requirements	Now the planning is made, Marie enters the particle for Aquest, frem 2020 to 2420 with time usion 04000 - 12300 and 12400 - 12300. She defines all the group conditions: start and one time time total (B manimum amount of children per parent for one day (mar. 6 children J parent).	Marie creates the period in the agenda '20/8' to 24/8' and fils in all this settings: start and enc slots, and maximum amount of children per period. Marie enters he availability and needed child care days for her children
SROUP COORD	NATION & PARTICIPATION	GROUP COORDINATION & PARTICIPATION MANAGEMENT	ACTIONS ON CORIDO
insert availability as volunteer	Insert participation of number of children	Exercises, Papi, Marcia, Gine, Mpaneja, Manolis, Annelles and Mattiag back centers to the COLD application and enter their availability as a co-playing parent, and insert the participation of their militaries for the application and the first interim this information, please consult secial hater. The planning is new composition of one spectra method parents hacking, Therefore, Marle posts a message on the development of the complexity of the application of the provide scale complexity of the application of the spectra parents in lacking. Therefore, Marle posts a message on the development of the development of the total range methods applied to the development of the total range methods and executing the complexity of the total range methods and applied to the development of the total range methods and applied to the development of the total range methods and applied to the development of the total range methods and applied total range methods and the spectra of the development of the development of the total range methods and applied total range methods and the development of the development of the development of the development of the total range methods and applied total range methods and the development of	ALL: everyone clicks or the period "20/8 to 24/8" to participate. ALL: everyone enters hi availability as co-playin parents, and for which days child care is needed Check the Google exce sheet: http://bit.hy/21/0/Rim Maxim.enter.a.period.



families ,	rite down your feedback	FEE here, and send it to	DBACK FORM	els@destuwerij.be	and info@sturveria.be
L My name:					
2A. To what extent do you think the user journey with scenario was well explained for you?	Not clear at all	Unclear	Neither unclear, nor clear	Clear	Very clear
38. Can you please provide some explanation for your provided answer above: (e.g. should extra steps be added to the user journey, was it difficult to follow for you, did you know wholt to de etc.)					
What do you think is currently working well on the COKIDO application?					
What do you think is currently not working so well on the COKIDO application?					

		In the part with all the necessary health information and include information. One of the other parents, one of an annequence, the other parents in the second part of the Markie keeps track of the cents that are made part day, and eather table has the networks. For information, as the first days one for example and part of the child short. Out days the theory of the second short is the child and the second short of the second short. The second short the example and the second short is the second short. The second short is monothly capacited, and Marka and Manka there capacity days (the parts same particular short the extension on the dasbased in the grave (but each free children short parameter) appreciation (1).	
	EVALUATE	EVALUATE	ACTIONS ON COKIDO
Evaluate the activity/group	Change group agreement/ improve group management	The CDBD week is finished, and all parents and children tituts to prepare himselves again for the start of new school semister in Sigstember. Before haut, Maria would lake to know how everyone exportienced the self-arranged child care in August. Star invites: Karolina and Pagi is come over to her place, with also Ananleis, Matla and Elfes and make some orests about what went good, and what could be improved for the next time.	



share	
o what extent do you think hat the current system is sable for the 'flexible cenario' of organizing child are in <u>your city lab</u> ?	
lease provide any other cedback about the COKIDO pplication in the text box:	









Annex 3. Full requirement list

Legend:

ID: Identification number

Requirement: Title of the requirement

Description: Detailed requirement description

Notes: Notes or criticalities associated with the requirements

Category: Requirement category

Priority: Requirement order of importance (from high to low)

Prototype version: Whether the requirement is addressed in the prototype presented in this deliverable (v1) or if it will be addressed in the second release (v2)

ID	Requirement	Description	Notes	Category	Priority	Prototype version
1	Website for each community	Each community has a website as companion of the app (each CityLab can have more than one community)		Website	High	v1
		Perhaps we could use second level domains for these (e.g. trento.families-share.eu).				
2	Website shows the list of groups for that community (as in Cokido)	We can create an endpoint within the app that returns information about public groups. So the website could be totally static, apart from the content shown from that endpoint. That way one could browse some public groups and perhaps see photos, just like in Cokido. If they click on the group however, they will need to download the app and register.		Website	Low	v1
3	The app has different instances	Each community will have its app to download from the Google Play Store (android first and then iOS later on)		General	High	v1
4	App design is mobile first	The interface will be designed mainly for mobile phones but it can be access also from the web (for iOS and web users)		General	High	v1
5	Search group	Users can search for groups from the web page or from the mobile app		Search	High	v1
6	Search users	New users should be able to search for other users and ask them to join her/his group Should it be optional?	Sharing phone number or other contact to the public	Search	Low	v2
7	User name visibility	User should be able to decide if their name should be searchable (visible / not visible)	Depend on user search	User profile Privacy	High	v1
8	User search visibility	Some users could decide to be invisible to the community. If they are not visible, to add them to a group or as a parent you should input the email or telephone number		User profile Privacy	High	v1
9	Cancel profile	Users should be able to cancel all their information		User profile	High	v1





				Privacy		
10	Suspend profile	Users should be able to suspend their profile		User profile Privacy	Medium	v2
11	Export all information	Users should be able to export all their data stored in the platform (as JSON)		User profile Privacy	High	v1
12	Integrate children information within the platform	Children information should be provided within the app (not in a printed form) Data should be encrypted		Children info Privacy	High	v1
13	Showing children basic information + special needs	Children basic information such as name, age and gender should be visible to the other members of the group (when organizing an activity) If there is any special needs, a symbol can be placed next to the children name Integrate child card inside the app. So that we can search e.g. based on the age of the participants of the group. Age and gender are most important info too. Perhaps also add information about possible health issues (call it "special needs").		Children info	Medium	v1
14	Managing who can view your full children information	When users provide their children information they should be notified and accept that these information can be shared with other members of the group. Users should be able to decide who can see this info. [Information sharing option]	To be refined in WP2	Children info Privacy	High	v2
15	Export children information	Users should be able to export in a PDF file the children information of the activity they are involved		Children info Privacy	High	v1
16	Privacy consent at the registration	When users register in the platform, the platform should make sure that consent is "informed consent" and provide necessary privacy notice and other information at the time user consent is required. The registration process stops if user do not provide the consent		Log-in / Registration Privacy	High	v1
17	Parents can add other users as parents	Parents have different profile and their share the same children profile A parent can be added as co-parent / guardian / family member	! terms: parents / guardian / (framily?)	Children info User profile	Medium	v1





18	User hierarchy	Community manager <- Group administrator <- User (parents / professionals) <- External [i.e. person not registered in the platform] This means that the community manager is inherently a Group administrator for all groups The Professional is a user role that has certain permissions.	County London County London Anti- Anti- County London Anti- County London Anti- County London Anti- County London Anti-	User categories	High	v1
19	New member notification	When a new member enter a group all other members are notified	Privacy implications	Notification	Medium	v1
20	New member acceptance rule	Two options are provided: Strict : all members (who are also group administrators) they have to agree to the new member Flexible : at least one group administrator agrees	Decided at the community level (the default)	Group management Community management	High	???
21	Single sign on	This is an optional feature. We will start with registering for a local account functionality and perhaps integrate that in the future.		Log-in / Registration	Low	v1
22	Community default options	 Options when you create a community: New members are automatically administrator OR not Approval for new members: Do all group administrators need to agree? Or just one is fine? (i.e. AND or OR). [see #20] Group can change this option or not 		Community management	Medium	???
23	Community access option	The community can be open or not		Community management	Medium	v1
24	Group settings when creating a group	A group can be visible or not visible: that is a group can be searchable or not. If it is visible, an external user can contact the group administrator for joining the group		Group management Privacy	Medium	v1
25	Join a group with an invite	All groups are invite-only. Some are visible and some are not. If it is not visible you have to receive an invite by the group administrator to join in. If the group is visible, you can contact the group administrator to receive an invite.		Group management	High	v1
26	Type of notifications	Members and group administrators should receive notifications. System event notifications e.g: - "a new user entered the group" - "a new activity has been created' - "the agenda for a specific activity was closed" The notification can be sent in the phone or by email		Notifications	High	v1
27	Phone notifications	Phone notifications are enabled		Notifications	Medium	v2




28	Professional users	Professionals can be invited by group administrators. They are users and can access information related to the activity in which they are involved OR we can keep as it is in Cokido (information provided in the activity by the group administrator)	This requirement should be discussed with other partners To be refined in WP2	User categories	Medium	v2
29	Assign group roles	Group administrators can assign different roles to the members (e.g. location manager, financial manager,) For now it is just a text field Possibly implements checklists (one for a "group administrator") for supporting in managing group roles	We can add it as text in the description of the group	User categories	Low	v2
30	Types of activities	The interface should support activities that have two characteristics: - Recurrent vs One-time - Flexible vs Fixed User should not categorize the type of activity, this can be automatically inferred by the system		Activity management	High	v1
31	Promote groups and activity	We should provide indications or material for supporting the promotion of groups or activities (flyer, social media material, etc)		Group management Activity management	Low	v1
32	Evaluating an activity	When closed, activities can be evaluated by their members (e.g. with a questionnaire, a summary of the activity, a checklist)		Activity management	Medium	v2
33	Sharing knowledge	Once finished, information on activities and groups can be shared within the community through the website		Activity management	Low	v2
34	Starting page / Homepage for new users	Information displayed to the users when they access the platform: - Login Registration form - Info on Families_Shares project - Info on active groups		Interface	Medium	v1
35	Starting page / Homepage for registered users	Information displayed to the registered users when they enter the application: - Calendar - Joined groups - Notifications		Interface	Medium	v1
36	Provide checklists	Provide users with checklists for supporting some activities (WhatsApp group creation, financial rules, etc.)		Interface	High	v1
37	Log-in with email	Allows log-in with email address	This requirement should be discussed with other partners	Log-in / Registration	High	v1





			To be refined in WP2			
38	Log-in with SMS	Allows log-in with SMS (not only with an email)	This requirement should be discussed with other partners	Log-in / Registration	Medium	v2
			This log-in option might require a paid service			
			To be refined in WP2			
39	Support communication within and outside the app	Communication can be supported within the app (announcements / message) or outside (WhatsApp/Telegram/facebook). This can be decided by the community manager.	The type of communication should be decided at the community level	Communicati on Community management	Medium	v1
40	Announcements (a.k.a. Messaging) feature	Kept as they are in Cokido (basic) but call them Announcements and have it for informing group members	To be refined in WP2	Communicati on	High	v1
		This can include also info for support the group to manage a whatsapp / telegram group				
		Users should be able to post message and give replies				
41	Edit announcements / replies	You can edit announcements or replies (created by you)		Communicati on	Medium	v1
42	Deleting announcements / replies	You can delete announcements or replies (created by you)		Communicati on	Medium	v1
43	"Twitter" style notification	Receive only one notification with information on the number of #	Depend on phone notifications	Communicati on	Low	v2
44	Images in the announcements	Announcements can include an image		Communicati on	Medium	v1
45	Activities are mapped in a collection of timeslots	When you create an activity you set a time range (and this can be edited) and define time slots		Activity management	High	v1
46	Timeslots have counters	Users should be able to mark their availabilities and their need for each timeslot		Activity management	High	v1
		Counters can represent volunteer availabilities AND needs (children)				
47	Propose different activities	Users should be able to propose multiple activities for the same time slot	Requirement from Venice	Activity management	High	v1





48	Problematic timeslots	Users should be able to see time slots that are problematic (when the minimum number of volunteers or children is not reached, or when there is an unbalanced ration between volunteers and children, etc) Using different colors to signal problematic and non-problematic timeslots	Specify what problematic means (min/max # of children, min # of volunteers)	Activity management	High	v1
49	Export agenda as XLS	Export an agenda with all activities in the group calendar for supporting discussion as XLS file (plugin)	Requirement from Venice	Activity management	High	v1
50	Calendar view	Users should be able to see calendar with: - PERSONAL VIEW: the activities in which you are involved, and your children is involved in - GROUP VIEW: all the activities of that group		Activity management Calendar	Medium	v1
51	Toggle Calendar / List view	Users should be able to toggle view as calendar (month / week) or as a list (a list of timeslots)		Activity management Calendar	Medium	v1
52	Optimal solution	The application proposes optimal solution after collecting votes		Activity management	Low	v2
53	Set constraints/ variables for slot confirmation	When creating an activity set the minimum number of children or volunteers required for each activity		Activity management	High	v1
54	Who can propose an activity	Every group member can propose an activity and a group admin (<u>iust one</u>) should agree	This could be changed in future versions	Activity management	Medium	v1
55	Who can modify / confirm and close an activity	Only group administrators can modify or close or delete activities	This could be changed in future versions	Activity management	High	v1
56	Activities detail	When you create an activity you define the title and the timeslots. Activity description, location, cost and image are optional.		Activity management	High	v1
57	Timeslot information	Slots display the activity name, you can add a description, they have a counter for participation and a counter for children registered to that activity		Activity management	High	v1
58	Professionals and timeslots	If a professional is involved, he/she can be added in the time slot detail (by group administrators)	See 28	Activity management	High	v1
59	Information on a timeslot	In a single time slot you can define the location and the description		Activity management	High	v1
60	Apply changes to activity time for all the time slots	Users should be able to modify time for multiple time slots		Activity management	Medium	v1





61	You can duplicate a time slot (for recurrent events)	Repeating a timeslots means repeating for a week/month/ same days	Define duplication options	Activity management	Medium	v1
62	Export in your calendar	Export an activity calendar (once it is fixed) to your digital calendar		Calendar	Low	v2
63	Calendar in the homepage with commitment and fixed slots	A calendar showing all the activities in which I am involved (confirmed or open) or my children (confirmed or open) is displayed in the app homepage		Calendar	Low	v1
64	Calendar with colors	The color represents time slots (days or weekly) colored if there is an activity for me / or my child(ren).		Calendar	Medium	v1





Annex 4. Wireframes and material used in the design sprint workshop

COKIDO co-design workshop material





⊐⇔×û	(1797/Aprilan_pha	Fundes, Store				6
			D	n	-	-
	C	Members				

COXQ Continue	tan in			
	e ·	- 0	(B) ==== (B)	
	Period	•		
O Add a tobe partial	Ê			
	Delect a period			

Invite f(r)amily member

¢	Framily	
Invite family or friends to become po	art of your circle	

Create new perios

	Pantikes_Bhare	
	sharation	
	New period	
Tota		
None		
First day of the period		
ddinos/yyyy		*
Last day of the period		
dit/mm/yyyy		*
Location		
Location		
Disribuit dia lassot		
#10.12.00		
@ 16.02 - 18.00		
	box	
13		
and the second s		



Group members overview







Periods (with info)

	Mare or		_		Fare	And then				-
	-		-			a	0			1
					Peri	ode				1
		-		Jan			mondo	x 11 June		
Not a case particul	**	iner.a	-			1	Enro	liment		1
	Constants					800-10				
(Neueries period of Ame Neueries - period of Ame E Tel. Instant, periodente	1	ang and	(too) too oo	er haftilige på Bergins som s	1	Children 12 Janet Headkman				
	0057.M	n tre				Asula G Cares Heatmar				
		-	**	**					. Inc	ł
	+ * hrs						Owner			
	1.50.000				2	LOCATION ADDRESS				
	+ the					Etherboot				
	A W-fare					cost.				
	10.000					0				
	4 10.000		-	- t-	-	And other Designations				
						BABARLA ACH THES DAY				
	10.000			- 1	-					
	# 10. http:						Partic	pante		
	8.31 fee			1		ADVATE				
	1.82 (100					Cortrus Verenhi				
	1000	-	-	-	-	Wan Usrabbery				
	-		-	-	_	CHILDREN				
	Cost for paried					Joran Vasch				
			Date of			Warm Manufact				
				100						

Create new period (options) Period detail

	New period	
Trim		
None		
First day of the period		
an on the		*
Losi dap of the period		
SECONDER .		
Louise		
Location		
The second star have a		
@ \$00-M.00		
· ****		
	las .	

and the second	Fardes_Shave	
	April 1940	6
	monday 11 June	
	Enrollment	
800-12.00		
Ohidran		
The Vesition		
1112		
Carina Maskiman		
of the Usediargha		
		flow participants
	Oeneral	
LOCATION ADDRESS		
Etierbook		
costs		
63		
BABYELT FOR THES DAY		
	Participante	
451175	- or nogenitie	
Carina Veeshman		
Win Vanitherates		
Comp (Comp Comp Comp)		
CHILDREN		
Jaren Veeckman		
Yara Veeckman		

Side bar

	Families_3hare	
20×01	Hits://Sendes.ahare.com	
		×
	my groups	
	Red danks T	
	Teat Group - Teams City Lak	
	Q. find group O Stort group	
	👩 Homepoge	
	🛔 Profile	
	C Log out	
	NL EN	

Create new group

100 C 100 C	Fateles, Share	
	ndiag_thans can	\square
<	New group	
None		
Nome		
About O Entar have all important inh This samues as introduction	matter date the group. Net for raw members	
About the group		
Pager		
Oive the lown or the p	etinde	
2		
	Blat	
		4

Search groups



Settings (overview)



Request invitation



Settings (variables)



Group messages









Annex 5. Color palette proposals and survey results







This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783





Please rank your preferences



Preference scores collected among the consortium partners through the online survey





Annex 6. Mobile application wireframes

Homepage and log-in







Registration and sign-up

Sign up
V 🖉 🗎 12:30
← Sign up
Do you already have an account? Log in
Name
Phone Number (optional)
Email
Password
Confirm password
My profile appears in search results
I accept the Terms of Use and the Policy in regards to the treatment and use of my data.
CONFIRM

Sign up 2

Sign up 5

💎 🖌 🔒 12:30						
← Sign up						
Do you already have an account? Log in						
Name Lucia Bianchi						
Phone Number (optional)						
Email						
Password						
Confirm password						
My profile appears in search results						
 I accept the Terms of Use and the Policy in regards to the treatment and use of my data. 						
CONFIRM						

Sign up Do you already have an account? Log in Name Lucia Bianchi Phone number +48 12345678 Label +48 12345678 Label Mobile Email Password Confirm password My profile appears in search results Lacept the Terms of Use and the Policy in regards to the treatment and use of my data.

Sign up 4

Sign up Do you already have an account? Log in Name Lucia Bianchi Phone number +48 12345678 Lucia.bianchi@email.com Email Lucia.bianchi@email.com Password Confirm password I accept the Terms of Use and the Pholey in regards to the treatment and use of my data.

		🚽 🔻 🖬 🖬 12	2:30
÷	Sign up		
D	o you already have an acc	count? Log in	
Name			
Luci	a Bianchi		
Phon	e number	Label	
+48	12345678	Mobile	r
Email Iucia Passv	a.bianchi@email.com		
•••••	•••••		
Confi	rm password		
My pr	ofile appears in search	results 🧧	•
	I accept the Terms of L Policy in regards to the use of my data.	lse and the treatment and	
	CONFIRM		

Sign up 6

Sign up 3

	💎 🛋 🛢 12:30						
← Sign up							
Do you already have an acco	ount? Log in						
_{Name} Lucia Bianchi							
Phone number +48 12345678	Label Mobile						
Email Iucia.bianchi@email.com Password							
Confirm password							
My profile appears in search results							
 I accept the Terms of Use and the Policy in regards to the treatment and use of my data. 							
CONFIRM							





User profile

User profile	User profile 2	User profile 3	Modified profile	Child added to a
e Lucía Blanchi Mago Okaria (Mago)	e Lucia Bianchi W QRIER MAG		Lucia Blanchi	Cucia Bianchi
48 123 456 78 Mobile	Giada 6 years old Gid	asron Jones	•48 123 456 78 Mobile	Gabriele 10 years old
Church Street 45 Address		Melia Kendrick	Church Street 45, Trento, Italy	Giada Gyeans old
Lucia bianchi@email.com Personal		Anna D. Bennett	Vucia bianchi@email.com Personal	
Edit user profile	Edit user profile 2	Edit user profile 3	Men	
× Edit profile	Edit profile	Edit profile	Expon data Debris data Sign nel	
Party survive Linkel	Prote taxtor Later	Prins tember Laber		
• +48 12345678 Mobile •	+48 12345678 Mobile *	+4812345678 Mobile		
Church Street. 45 City State -	Church Street, 45	Church Street, 45		
tucia,bianchi@email.com	lauda.bianchi⊜email.com	Mucia.bianchi@ernail.com		

Children profile

Children profile	Edit children pro			
Gabriele Bianchi	V Edit profile Surger Num Banchol Marchol Numeric Banchol Numeric Numeric Banchol Numeric			
QC Boy	e.g., food intolerances			
22 Lucia Blanchi ADO FARENT				
Additional info ADD				
Add child screen	Add child 1	Add child 2	Add child 3	Add child 4
× Add child save	Add child SAVE	× Add child SAVE	X Add child SAVE	× Add child SAVE
Name	Name Gabriele Bianchi	Name Gabriele Bianchi	Name Gabriele Bianchi	Name Gabriele Bianchi
Birthday 👻	Birthday	Britiday March 13th, 2008 -	March 13th, 2008	March 13th, 2008
Gender 👻	Gender 👻	Gender 👻	Gender Boy	Gender Boy
Add specific information ADD e.g., food intolerances	Add specific information ADD e.g., food intolerances	Add specific information e.g. ford intelerances	Add specific information ADD e.g., food intolerances	Add specific information ADD e.g., food intolerances
 accept the Terms of Use and the Policy in regards to the treatment and use of my data. 	Laccept the Terms of Use and the Policy in regards to the treatment and use of my data.	 I accept the Terms of Use and the Policy in regards to the treatment and use of my data. 	 I accept the Terms of Use and the Policy in regards to the treatment and use of my data. 	 I accept the Terms of Use and the Policy in regards to the treatment and use of my data.

Navigation drawer and FAQs



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783



Navigation drawer	FAQs	Start up guide
A Home page	← FAOs	▼
My profile	How does a group work practically?	Launch the initiative in your circle
+ Create a group	Which agreements apply to a grou	Dup?
Q Search a group	What if Lam unexpectedly prevent	2 Unite the first enthusiasts Secondary line text Lorem ipsum dolor
PAQs	during my turn?	Contact the location-line item
1 About	What if I do not have experience w a group of children?	with Secondary line text Lorem ipsum dolor sit amet, consectetur adipiscing elit.
Sign out	Info for schools and organisation	4 Make internal appointments Secondary line text Lorem ipsum dolor
	Are the group insured?	Close the agenda 5 Close the agenda Secondary line text Lorem ipsum dolor
	What is the benefit for my school / company / organization?	I/ Kick-off!
	Is this approved by the governmen	ent?
		7 Welcome! Secondary line text Lorem ipsum dolor sit amet, consectetur adipiscing elit.

Invite members - Group Administrator





Create a group







Search a group



Group page





Group - about ÷ Group Star 📕 About the group The group Group Star involves some members of the research center Star in northern Italy. It provides a way for parents to share childcare for their children. Û



Group - About



Group - Notificati...

Group Star

Group Star welcomes you into the group.

The participation is open for the new activity "Summer camp".

The group follows some specific rules.

Group - Message

Hello there!

New activity!

Group rules

LEARN MORE

2

Replies (8)

Group - Notificati...



Group - Read noti...



Group - Activities









Create a new activity





Classic Stepper	Classic Stepper	Classic Stepper	Classic Stepper	Classic Stepper	Classic Stepper
X New activity	New activity Informations	New activity Informations	New activity Informations	New activity Informations	New activity Informations
Prem 12.00 - to 13.30 Prem 12.00 - to 13.30 Trice content Prem 12.00 - to 13.30 Prem 12.00 - to 13.30 Prem 13.5 P	bras Timelon dises stats to the selected days dises stats to the selected days dises stats to the selected days dise stats to the selected days dise stats dises stats di	bate Timetan dd tans sidns to the selected days dd tansation	bree Tomuco de use use to te salected days de use use use use use use use use use us	Date: Elect ser enren degs 5 M T V T T 2 3 4 T T T T 2 3 6 5 1 <td>Data Agent 2018 A 5 4 7 14 7 7 5 1 2 3 4 7 14 1</td>	Data Agent 2018 A 5 4 7 14 7 7 5 1 2 3 4 7 14 1
Classic Stepper Classic S	Classic Stepper Vew activity Informations	Classic Stepper V New activity Informations	Classic Stepper V New activity Informations	Classic Stepper V 1220 V New activity informations	Classic Stepper Tuesday after-school Exve 18 August
Cotes C	Dates 4.11.8.2 Anguet 2018 Timeslets Add time sides to the selected days 4August 2019 2 timeslots 11 August 2018 2 timeslots 11 August 2018 2 timeslots x	Date 4.11, 5, 27 August 2018 Timesics Add time elasts to its selected days 4 August 2018 2 timesicts 11 August 2018 3 timesicts 3. timesicts 3. timesicts	Dates 4.115,823 August 2018 Timesiots Edit time alcrists the subscript days 4 August 2018 2 timesiots ^ 11 August 2018 3 timesiots ^ 18 August 2018 2 timesiots ^	Cotes	Useday after-school •." Starts at 12.00 ends at 13.30 Itile mmm. Elementary School, Trento I Required purents 3 - Required children 11 -
12:00 - 13:30 × Tape for details × + AD TMERLOT 2 timeslots ^ 18: August 2018 2 timeslots ^	12.00 - 13.30 × Tay for details × 13.30 • Credati 13.30 • Credati 18. August 2018 2 timeslots ^ 25. August 2018 2 timeslots ^	12.00 - 13.30 × 13.30 - 15.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 18.400 - 10.30 × 19.50 - 10.30 ×	12.00 - 10.30 X 12.00 - 10.30 X 12.00 - 10.30 X + 400 OULLI 28 August 2018 2 timeslots ^	12.00 + 13.00 + 4.00 • 04.01 Trinenlat removed 0.020	Description ummunity \$ 36 or musu. Charges will be each only on this timuskit and only an all be activity or musu.

View time slots and insert availabilities

Slot	s of an activity – 1	Slot	s of an activity – 2		Slot	ts of an activity – 3			Slot	s of an activity – 4	SI	ots	s of an activity – 5		
	▼⊿ 🖿 12:30		₹4	12:30		•	12:30			▼⊿ 🗎 12:30			•	1 🔳 12:31	þ
÷	Tuesday after-school 🧪	÷	Tuesday after-school	<u> </u>	÷	Tuesday after-school	<u> </u>		÷	Tuesday after-school 🧪	•	t ,	Tuesday after-school	1	
Times	slots ~	Time	lots	~	Time	eslots	~		Time	ilots 🗸	Т	imes	lots	~	1
	All timeslots 👻		All times	slots 💌		All tim	rslots 🔻			All timeslots 👻			All time	islots 💌	
4 Aug	12.30 - 15.00 4 ∰ 16 ⊚	4 Aug	12.30 - 15.00 4 # 16 ②	0	4 Aug	12.30 - 15.00 4 # 16 ③	0		4 Aug	12.30 - 15.00 4 # 16 ©	A	1 ug	12.30 - 15.00 4 # 16 ②	0	
	Gabriele and Giada are signed up.		Gabriele and Giada are signed up.			Gabriele and Giada are signed up.				Gabriele and Giada are signed up.			Gabriele and Giada are signed up.		
	15.00 - 16.30 0 ∰ 1 ☺ Not enough participants.		15.00 - 16.30 1 🙀 1 😳 Not enough participants.	0		15.00 - 16.30 1 ₩ 2 ③ Not enough participants.	0			15.00 - 16.30 1 ₩ 2 ② Not enough participants.			15.00 - 16.30 1 🙀 2 🌚 Not enough participants.	0	
	🚱 You 🍪 Gabriele 🚳 Giada 🧯		🕑 You) 🍪 Gabriele) 🚳 G	iada 🧣		🔗 You) 🍪 Gabriele 🔗	Giada 🧯		11	You and Giada are signed up.		1	You and Giada are signed up.		
11	12.30 - 15.00	11	You are signed up.		11	You and Giada are signed up.		Aug	Aug	12.30 - 15.00 0 ₩ 0 ©	A	Jg	12.30 - 15.00 0 ∰ 0 ☺ Not execute participants	0	
Aug	0 👬 0 🌚 🚺 Not enough participants.	Aug	12.30 - 15.00 0 11 0 3 Not encugh participants.	0	Aug	12.30 - 15.00 0 🎁 0 🍚 Not enough participants.	0			15.00 - 17.30			15.00 - 17.30		
	15.00 - 17.30 0 ₱₱ 1 ♥ Not enough participants.		15.00 - 17.30 0 ∯ 1	0		15.00 - 17.30 0 ∰ 1 ⊗ Not enough participants.	0			0 # 1 3 Not enough participants. Gabriele is signed up.			0 # 1 @ Not enough participants. Gabriele is signed up.	0	
	Gabriele is signed up.		Gabriele is signed up.			Gabriele is signed up.				17.30 - 19.00 3 ii 11 ()			17.30 - 19.00 2 # 11 ©	0	
	3 # 11 @		17.30 - 19.00 3 🙀 11 🌚	0		17.30 - 19.00 3 🙀 11 💿	0			🖉 You 🧐 Gabriele 🔕 Giada 🧯			🚯 You 🍪 Gabriele	Giada	
18	1240 - 1500	10	You are signed up.		10	You are signed up.			10	You are signed up.			Now you are unsubscribed.		
Aug	Happy Birthday Marco! 2 ∯ 7 ☺ Cost changes to 0€	18 Aug	12.40 - 15.00 Happy Birthday Marco! 2 ∯ 7 ☺ Cost changes to 0€	0	Aug	12.40 - 15.00 Happy Birthday Marco! 2 ∰ 7 ⊗ Cost changes to 0€	0		18 Aug	12.40 - 15.00 Happy Birthday Marco! 2 ∯ 7 ☺ Cost changes to 0€	A	ag	12.40 - 15.00 Happy Birthday Marco! 2 ∯ 7 ☺ Cost changes to 0€	0	
25 Aug	12.30 - 15.00 0 ₩ 3 Not enough participants. Gabriele and Giada are signed up.	25 Aug	12.30 - 15.00 0 # 3 @ Not enough participants.	0	25 Aug	12.30 - 15.00 0 ## 3 @ Not enough participants.	0		25 _{Aug}	12.30 - 15.00 0 # 3 3 Not enough participants.	2 A	.5 ug	12.30 - 15.00 0 軒 3 ② Not enough participants.	0	
	15.00 - 16.30		Gabriele and Giada are signed up.			Gabriele and Giada are signed up.				Gabriele and Giada are signed up.			Gabriele and Giada are signed up.		
	0 # 1 ③ Not enough participants.		15.00 - 16.30 0 ## 1 @ Not enough participants.	0		15.00 - 16.30 0 ## 1 @ Not enough participants.	0			15.00 - 16.30 0 科 1 ② Not enough participants.			15.00 - 16.30 0 ## 1 @ Not enough participants.	0	

Filter activities



This project has received funding from the European Union's Horizon 2020 CAPS Topic: ICT-11-2017, Type of action: IA, Grant agreement No 780783





Calendar management







