

## Horizon 2020

### Call: H2020-SMEInst-2016-2017

(Horizon 2020 dedicated SME Instrument 2016-2017)

### Topic: SMEInst-12-2016-2017

Type of action: SME-2  
(SME instrument phase 2)

Proposal number: 739349

Proposal acronym: P2Property

Deadline Id: H2020-SMEINST-2-2016-2017

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#### *How to fill in the forms*

The administrative forms must be filled in for each proposal using the templates available in the submission system. Some data fields in the administrative forms are pre-filled based on the previous steps in the submission wizard.



Proposal ID 739349

Acronym P2Property

## 1 - General information

Topic SMEInst-12-2016-2017

Call Identifier H2020-SMEInst-2016-2017

Type of Action SME-2

Deadline Id H2020-SMEINST-2-2016-2017

Acronym P2Property

Proposal title\* Peer to Peer Property

Note that for technical reasons, the following characters are not accepted in the Proposal Title and will be removed: < > " &

Duration in months 24

Free keywords collaborative economy, property, peer-to-peer, business technology

### Abstract

*We will do to estate agents what Opodo did to travel agents, eBay did to secondhand shops, and Airbnb is doing to hotels. By getting rid of the middleman in favour of a peer-to-peer participatory model, we will bring the property market in line with the changing needs of society and the rapid pace of technology. Our solution is a technology platform called Qoob that lets you rent property directly from your phone, making estate agents a thing of the past. Described by the Daily Mail as 'the Tinder of property', our platform makes property transactions cheaper, faster and globally consistent. It lets owners list their properties and tenants list their needs. Both can browse, make a match and exchange rent, even at short notice or for an undermined length of time. Our technology will reduce cost, increase flexibility and bring Europe-wide consistency to finding accommodation. By letting owners set their own terms, we will catalyse a market correction in which shorter and flexible tenancies are found in proportion to demand. Qoob is part of a paradigm shift from ownership to access, offering citizens a means of agile moving and renting.*

Remaining characters 849

Has this proposal (or a very similar one) been submitted in the past 2 years in response to a call for proposals under the 7th Framework Programme, Horizon 2020 or any other EU programme(s)?  Yes  No

Please give the proposal reference or contract number.

734051



Proposal ID **739349**

Acronym **P2Property**

### Declarations

1) The coordinator or sole applicant declares to have the explicit consent of all applicants on their participation and on the content of this proposal.	<input checked="" type="checkbox"/>
2) The information contained in this proposal is correct and complete.	<input checked="" type="checkbox"/>
3) This proposal complies with ethical principles (including the highest standards of research integrity — as set out, for instance, in the <a href="#">European Code of Conduct for Research Integrity</a> — and including, in particular, avoiding fabrication, falsification, plagiarism or other research misconduct).	<input checked="" type="checkbox"/>
4) The coordinator or sole applicant confirms:	
- to have carried out the self-check of the financial capacity of the organisation on <a href="https://ec.europa.eu/research/participants/portal/desktop/en/organisations/lfv.html">https://ec.europa.eu/research/participants/portal/desktop/en/organisations/lfv.html</a> . Where the result was “weak” or “insufficient”, the coordinator confirms being aware of the measures that may be imposed in accordance with the H2020 Grants Manual (Chapter on Financial capacity check); or	<input checked="" type="radio"/>
- is exempt from the financial capacity check being a public body including international organisations, higher or secondary education establishment or a legal entity, whose viability is guaranteed by a Member State or associated country, as defined in the H2020 Grants Manual (Chapter on Financial capacity check); or	<input type="radio"/>
- as sole participant in the proposal is exempt from the financial capacity check.	<input type="radio"/>
5) The coordinator or sole applicant hereby declares that each applicant has confirmed:	
- they are fully eligible in accordance with the criteria set out in the specific call for proposals; and	<input checked="" type="checkbox"/>
- they have the financial and operational capacity to carry out the proposed action.	<input checked="" type="checkbox"/>
The coordinator is only responsible for the correctness of the information relating to his/her own organisation. Each applicant remains responsible for the correctness of the information related to him and declared above. Where the proposal to be retained for EU funding, the coordinator and each beneficiary applicant will be required to present a formal declaration in this respect.	

According to Article 131 of the Financial Regulation of 25 October 2012 on the financial rules applicable to the general budget of the Union (Official Journal L 298 of 26.10.2012, p. 1) and Article 145 of its Rules of Application (Official Journal L 362, 31.12.2012, p.1) applicants found guilty of misrepresentation may be subject to administrative and financial penalties under certain conditions.

### Personal data protection

Your reply to the grant application will involve the recording and processing of personal data (such as your name, address and CV), which will be processed pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of personal data by the Community institutions and bodies and on the free movement of such data. Unless indicated otherwise, your replies to the questions in this form and any personal data requested are required to assess your grant application in accordance with the specifications of the call for proposals and will be processed solely for that purpose. Details concerning the processing of your personal data are available on the [privacy statement](#). Applicants may lodge a complaint about the processing of their personal data with the European Data Protection Supervisor at any time.

Your personal data may be registered in the Early Warning System (EWS) only or both in the EWS and Central Exclusion Database (CED) by the Accounting Officer of the Commission, should you be in one of the situations mentioned in:

- the Commission Decision 2008/969 of 16.12.2008 on the Early Warning System (for more information see the [Privacy Statement](#)), or
- the Commission Regulation 2008/1302 of 17.12.2008 on the Central Exclusion Database (for more information see the [Privacy Statement](#)).



Proposal ID **739349**

Acronym **P2Property**

## List of participants

#	Participant Legal Name	Country
1	Qoob Limited Ltd	United Kingdom



Proposal ID **739349**

Acronym **P2Property**

Short name **Qoob**

## 2 - Administrative data of participating organisations

<b>PIC</b>	<b>Legal name</b>
921466051	Qoob Limited Ltd

Short name: Qoob

### Address of the organisation

Street 35a South St

Town London

Postcode W1K 2XF

Country United Kingdom

Webpage <http://www.theqoob.com>

### Legal Status of your organisation

#### Research and Innovation legal statuses

Public body .....	no	Legal person .....	yes
Non-profit .....	no		
International organisation .....	no		
International organisation of European interest .....	no		
Secondary or Higher education establishment .....	no		
Research organisation .....	no		

#### Enterprise Data

SME self-declared status.....2015 - yes  
 SME self-assessment .....2015 - yes  
 SME validation sme..... unknown

Based on the above details of the Beneficiary Registry the organisation is an SME (small- and medium-sized enterprise) for the call.

NACE Code: 63 - Information service activities



Proposal ID **739349**

Acronym **P2Property**

Short name **Qoob**

*Department(s) carrying out the proposed work*

**Department 1**

Department name

not applicable

Same as organisation address

Street

Town

Postcode

Country



Proposal ID **739349**

Acronym **P2Property**

Short name **Qoob**

### Person in charge of the proposal

The name and e-mail of contact persons are read-only in the administrative form, only additional details can be edited here. To give access rights and basic contact details of contact persons, please go back to Step 4 of the submission wizard and save the changes.

Title

Dr.

Sex

Male

Female

First name **Thomas**

Last name **FINK**

E-Mail **tf@lims.ac.uk**

Position in org.

Director

Department

n/a

Same as organisation

Same as organisation address

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35a South St

Town

London

Post code

W1K 2XF

Country

United Kingdom

Website

www.theqoob.com

Phone 1

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Phone 2

+xxx xxxxxxxxxx

Fax

+xxx xxxxxxxxxx

### Other contact persons

First Name	Last Name	E-mail	Phone
antonia	tingey	at@lims.ac.uk	+442034174945



Acronym **P2Property**

### 3 - Budget for the proposal

No	Participant	Country	(A) Direct personnel costs/€	(B) Other direct costs/€	(C) Direct costs of sub-contracting/€	(D) Direct costs of providing financial support to third parties/€	(E) Costs of inkind contributions not used on the beneficiary's premises/€	(F) Indirect Costs / € (=0.25(A+B-E))	(G) Special unit costs covering direct & indirect costs / €	(H) Total estimated eligible costs / € (=A+B+C+D+F+G)	(I) Reimbursement rate (%)	(J) Max.EU Contribution / € (=H*I)	(K) Requested EU Contribution/ €
			?	?	?	?	?	?	?	?	?	?	?
1	Qoob	UK	941850	141278	100000	0	0	270782,00	0	1453910,00	70	1017737,00	1017737,00
	Total		941850	141278	100000	0	0	270782,00	0	1453910,00		1017737,00	1017737,00

Please note that budget amounts are represented in full, NOT as multiples of 1000.



## 4 - Ethics issues table

<b>1. HUMAN EMBRYOS/FOETUSES</b>		Page
Does your research involve <a href="#">Human Embryonic Stem Cells (hESCs)</a> ?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research involve the use of human embryos?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research involve the use of human foetal tissues / cells?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>2. HUMANS</b>		Page
Does your research involve human participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research involve physical interventions on the study participants?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>3. HUMAN CELLS / TISSUES</b>		Page
Does your research involve human cells or tissues (other than from Human Embryos/ Foetuses, i.e. section 1)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>4. PERSONAL DATA</b>		Page
Does your research involve personal data collection and/or processing?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research involve further processing of previously collected personal data (secondary use)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>5. ANIMALS</b>		Page
Does your research involve animals?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>6. THIRD COUNTRIES</b>		Page
In case non-EU countries are involved, do the research related activities undertaken in these countries raise potential ethics issues?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do you plan to use local resources (e.g. animal and/or human tissue samples, genetic material, live animals, human remains, materials of historical value, endangered fauna or flora samples, etc.)?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do you plan to import any material - including personal data - from non-EU countries into the EU? <i>For data imports, please fill in also section 4. For imports concerning human cells or tissues, fill in also section 3.</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Do you plan to export any material - including personal data - from the EU to non-EU countries? <i>For data exports, please fill in also section 4. For exports concerning human cells or tissues, fill in also section 3.</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	



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Acronym **P2Property**

If your research involves low and/or lower middle income countries, are benefits-sharing actions planned?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Could the situation in the country put the individuals taking part in the research at risk?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>7. ENVIRONMENT &amp; HEALTH and SAFETY</b>		Page
Does your research involve the use of elements that may cause harm to the environment, to animals or plants? <i>For research involving animal experiments, please fill in also section 5.</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research deal with endangered fauna and/or flora and/or protected areas?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Does your research involve the use of elements that may cause harm to humans, including research staff? <i>For research involving human participants, please fill in also section 2.</i>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>8. DUAL USE</b>		Page
Does your research have the potential for military applications?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>9. MISUSE</b>		Page
Does your research have the potential for malevolent/criminal/terrorist abuse?	<input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>10. OTHER ETHICS ISSUES</b>		Page
Are there any other ethics issues that should be taken into consideration? Please specify	<input type="radio"/> Yes <input checked="" type="radio"/> No	

I confirm that I have taken into account all ethics issues described above and that, if any ethics issues apply, I will complete the ethics self-assessment and attach the required documents.

[How to Complete your Ethics Self-Assessment](#)



Proposal ID **739349**

Acronym **P2Property**

### 3 - Call specific questions

#### Call specific declaration(s)

I declare on my honour that: Neither I nor any of the members of the consortium (if relevant) are involved in concurrent submission or implementation with another SME instrument Phase 1 or Phase 2 project.



Does your proposal build on a SME instrument Phase 1 project? Please indicate.

Yes  No

#### Excluded Reviewers

You can provide up to three names of persons that should not act as an evaluator in the evaluation of the proposal for potential competitive reasons.

#### Open Research Data Pilot in Horizon 2020

If selected, all applicants have the possibility to participate in the [Pilot on Open Research Data in Horizon 2020](#)<sup>1</sup>, which aims to improve and maximise access to and re-use of research data generated by actions. Participating in the Pilot does not necessarily mean opening up all research data. Actions participating in the Pilot will be invited to formulate a Data Management Plan in which they will determine and explain which of the research data they generate will be made open.

We wish to participate in the [Pilot on Open Research Data in Horizon 2020](#) on a voluntary basis  Yes  No

Participation in this Pilot does not constitute part of the evaluation process. Proposals will not be evaluated favourably because they are part of the Pilot and will not be penalised for not participating.

<sup>1</sup> According to article 43.2 of Regulation (EU) No 1290/2013 of the European Parliament and of the Council, of 11 December 2013, laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006.

#### Data management activities

The use of a [Data Management Plan \(DMP\)](#) is required for projects participating in the [Open Research Data Pilot in Horizon 2020](#), in the form of a deliverable in the first 6 months of the project.

All other projects may deliver a DMP on a voluntary basis, if relevant for their research.

Are data management activities relevant for your proposed project?  Yes  No

# Mobile technology for flexible peer-to-peer property rental (P2Property)

1 QOOB LTD (Coordinator)      Qoob Limited      UK

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# 1 Excellence

## 1.1 Objectives

### 1.1.a Our product

Qoob will do to estate agents what Opodo did to travel agents, eBay did to secondhand shops, and Airbnb is doing to hotels. By getting rid of the middleman in favour of a peer-to-peer model, Qoob is bringing the property market in line with the changing needs of society and rapid pace of technology.

Qoob is a technology platform that lets you rent property directly from your phone, making estate agents a thing of the past. Described by the *Daily Mail* as ‘the Tinder of property’ (section 1.1.b), our platform makes property transactions cheaper, faster and globally consistent. It lets owners list their properties and tenants list their needs. Both can browse, make a match and exchange rent, even at short notice or for an open-ended length of time.

#### *What we have done so far*

We designed, built and launched a successful mobile app for peer-to-peer property transactions. It is available for the iPhone and has had over 350 users. We received a one year incubation award from the London Institute for Mathematical Sciences, during which we:

- Tested and refined nine internal versions of our app and platform.
- Demonstrated four versions of our app in an operational environment.
- Launched our app on the iPhone and subsequently released three revised versions.
- Began a marketing and social media campaign with Bell Pottinger, acquiring over 350 users.

#### *What we will do in Phase 2*

- Make our platform more widely available by launching Android and tablet versions.
- Improve property search and owner-tenant matching by iterative cycles of verified learning.
- Integrate financial transacting whereby users can pay rent through our escrow system.
- Commercialize by charging a rent premium, selling custom contracts and advertising services.
- Achieve market penetration through local campaigns targeting students and hospitality staff.
- Secure early adopters and ignite general uptake in London and across the UK.
- Create a viral growth engine whereby users generate new users by sharing property listings.
- Achieve market replication in specific EU countries: Ireland, Germany, France and Belgium.

The structure of this proposal is shown in Figure 1. The five circles correspond to our five work packages. Our ultimate goal, generating profit through commercialization (WP4), depends on market replication and sustainable growth, whereby users generate more users (WP3). This in turn depends on focused local uptake by tenants and owners to overcome network effects (WP2), and app design lead by repeated cycles of build-measure-learn. Combining all of these is effective management and communication activities, which will boost our national and global marketing campaign (WP5).

Our Phase 2 objectives above match the objectives of our four non-management work packages WP1-WP4.

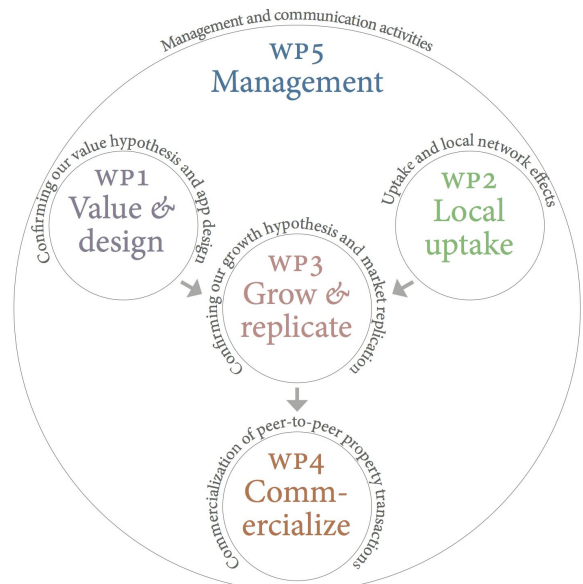


Figure 1. The overall structure of this proposal.

## 1.1.b Problem to overcome

### *How we live in homes is changing*

Throughout history, people spent their lives in the same homes. These buildings served as a place for shelter, services and storage. Immobility signalled not so much a lack of wanderlust as simple pragmatism: moving house was disruptive, complicated and time-consuming.

All this is changing. The world we live in has been transformed in ways that have revolutionised the very meaning of ‘home’. With more and more of our possessions portable (laptops, phones), rentable (Zipcar, Vélib bikes) or stored on the cloud (music, books, photos), the need for a fixed abode is diminishing. It’s getting easier to move, and more are doing so. That’s a trend that is set to continue.

For European citizens especially, where free borders make travel routine, more people are moving between and within countries to work, study or pursue new opportunities. And because more people—especially the 50% of adults who are single—are taking shorter tenancies and moving more often, there has been a surge in the rental market. ‘Home’ is now less about long-term possession and storage, and more about short-term access to comfortable shelter and essential services.

### *The real estate industry is not changing*

By contrast, real estate agents have been slow to change. Airbnb, HomeAway and other holiday letting platforms have altered the way we arrange vacation accommodation. But when it comes to longer-term accommodation in the place where we live—anything over a month—the services offered by estate agents are lagging behind the needs of society and the pace of technology.

Estate agents *are* willing to adopt new technology, so long as it doesn’t threaten their existence. UK dominant Rightmove curates all the properties listed by different agencies for consumers to browse. Movebubble is a concierge service app for booking viewings of agency-listed properties. Purplebricks and EasyProperty are online agents that are abandoning high-street shops for an online-only presence.

But from the point of view of owners and tenants, the basic model remains the same: The agency middleman matches supply and demand, in return for which he takes a sizeable cut. The market is fragmented and opaque due to exclusivity clauses and a lack of individual autonomy. And flexible, short term contracts are hard to get due to outmoded customs favouring stability over agility.

The EU SME Instrument is not the only one to promote “inclusive and reflective societies”. In 2015, British Parliament removed the remaining legislative hurdles, paving the way for our product:

We believe that the best way to tackle the lack of price competition is to promote and encourage new business models which may provide choice and put pressure on the traditional [estate agent] model.

We think there is space for new players to enter the portal market and provide platforms for private sellers [&] to have the necessary scale to overcome network effects.

We have considered the case for mandating access for private platforms to the major property portals, but it seems clear that, if regulatory barriers were removed, there would be scope for a successful platform to become established and allow private sellers to list on a sufficient scale to make an impact in the market (see 2.2.f).

*UK Competition and Markets Authority*



Figure 2. The launch of Qoob reported in the *Daily Mail*, Britain’s most-read newspaper (200m+ readers).

## 1.1.c EU-wide relevance

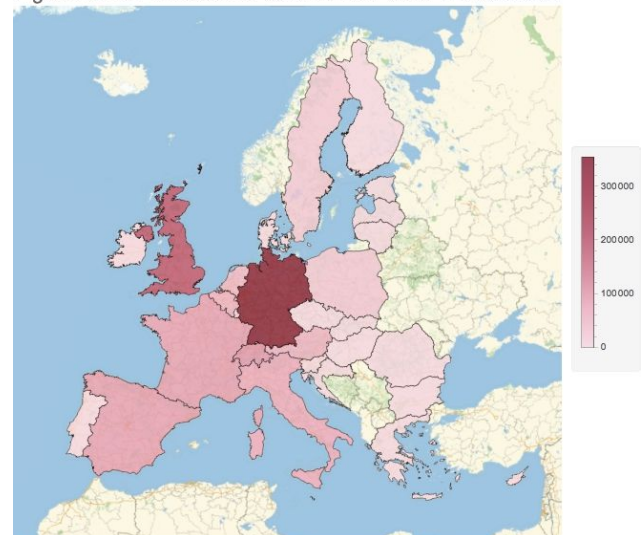
The need for a flexible and consistent property rental platform is especially strong in Europe. Freedom of movement between countries is a cornerstone of the Union. But in practice, finding accommodation outside of hotels and holiday lettings is bureaucratic, time-consuming and requires considerable advance notice. Inconsistent real estate procedures make it confusing for citizens of one country looking for accommodation in another. Accommodation, not immigration, is the biggest hurdle for Europeans moving country for study, work or new opportunities.

Take London, a popular city for EU citizens to live in. Talk to most expatriates and you'll hear the same thing: finding *accommodation*—not *work*—was the hardest part of relocating. Many are reduced to asking their Facebook friends for leads, or joining a local expat chat group in the hope of finding one that has a vacancy. Similar experiences can be heard in other EU cities.

Clearly there is a need for a change of paradigm in how we find and transact accommodation. By introducing a uniform technology across Europe for flexible peer-to-peer rentals, Qoob changes the way we live in and move between homes—whether it be across the city or across the continent.

According to data from Eurostat, each year 1.3m EU citizens move into an EU country not their own. This makes Europe particularly ripe for early-adopters of our technology. While the majority of Qoob's users will be moving city, not country, those who are crossing borders will feel the need for Qoob especially strongly.

Fig. 3. Annual influx of EU citizens from other EU countries



## 1.2 Relation to the work programme

This proposal responds to “SMEInst-12-2016-2017: New business models for inclusive, innovative and reflective societies”. We quote relevant parts of the call and explain how our project relates to it.

*The work programme calls for*

‘new ways of...moving and living... in European cities...’ and ‘new ways of creating innovative public services’.

‘*business model innovation, taking into account new opportunities arising from... individual empowerment, from a more collaborative economy,... and from the pervasive use of new technologies*’.

*How our product relates to it*

***Moving and living in Europe.*** We designed Qoob to change how we live in homes and move between them. The need for an agile rental market is especially strong in Europe, where freedom of movement is hindered by bureaucracy and a lack of consistency. Finding accommodation easily and quickly, at a fair price, is the weakest link in the chain of European open borders.

***New technology for individual empowerment.*** Technology removes the necessity for estate agencies, like it has done for travel agents (Opodo and Expedia), lending banks (RatesSetter and Zopa) and legal services (Rocket Lawyer). Smartphones let owners upload their properties and tenants browse them. ‘Access to supply’, long the secret sauce of agencies, is no longer a valid credential, thanks to the internet and GPS. By enabling owners and tenants to transact directly, Qoob encourages autonomy, creates transparency, and unifies the disjoint property market.

a movement to ‘attract business to use public platforms to create more value, as current business models do not adequately exploit the benefits of participation and collaboration’.

‘a change of paradigm from ownership to access...[in] sectors benefiting from digital technologies and ensuring more sustainable lifestyles to EU citizens, particularly in cities’.

**Public platforms and participation.** Qoob replaces agency-generated and agency-fragmented property databases with a participatory model in which users themselves create an open-access catalogue of supply and demand. This shift from an intermediary curating property to consumers doing so is in step with the shift towards a sharing economy. One consequence is that owners can edit their listings real-time in response to perceived interest, thereby increasing market efficiency.

**From ownership to access.** Because ‘home’ is becoming less about long-term possession and storage, and more about access to shelter and utilities, EU citizens are developing a different set of demands for where and how they live, and how often they move. Qoob meets those new demands.

## 1.3 Concept and methodology

### 1.3.a Our product so far

Qoob was awarded a one-year incubation by the London Institute in September 2015, which has enabled us to further develop and market our product (in lieu of SME Inst Phase 1 funding).

Qoob lets owners add and edit properties and owners browse them, all within minutes from a native mobile app. They can communicate through the built-in instant messaging, edit properties and profiles, select available dates from a built-in calendar, make inquiries and agree to rent.

#### Timeline of development

Mar 2014	Conception	Property platform conceived by scientists at the London Institute
Aug 2014	Web app I	Built platform and web app (website which imitates a native app)
Sep 2014	Web app I	First presentation to advisors and potential investors
Oct 2014	Web app II	Six iterations of user interface design mock-ups
Oct 2014	Web app II	Brought on board professional developer to rebuild platform
Nov 2014	Beta app	Fink and Lynch design specs for a native mobile app
Nov 2014	Beta app	Brought on board Synergy to help with programming
Feb 2015	Beta app vs 1	Vertical reduction: fewer hierarchical layers
Apr 2015	Beta app vs 3	Improved error tolerance; cleaner back end interface
Apr 2015	Beta app vs 4	More presentations to investors; unified booking & messaging
Jun 2015	Beta app vs 6	Colour and layout consistency; additional backend fields
Jul 2015	Beta app vs 7	Stabler database hosting; improved input prompts
Aug 2015	Beta app vs 9	Prototype tested in operational environment
Sep 2015	Incubation	Qoob won a one-year incubation award from the London Institute for Math. Sciences, providing office space, infrastructure and mentoring
Oct 2015	App Store 1.0	iOS app made publicly available for free on the Apple App Store
Oct 2015	App Store 1.1	User interface improvements; bug fixes; user support; edit dates
Nov 2015	App Store 1.2	Search before sign-up; message notifications; weekly price; improved calendar; new stable back end.
Dec 2015	App Store 1.3	Facebook, Twitter sharing; improved search; photo arranging; simplified inquiry
Dec 2015	Marketing	<i>Daily Mail</i> newspaper article about our product appears
Mar 2016	Uptake	Over 350 people have downloaded our app and used our platform
Apr 2016	Recruitment	Addition of a property market specialist to our core team



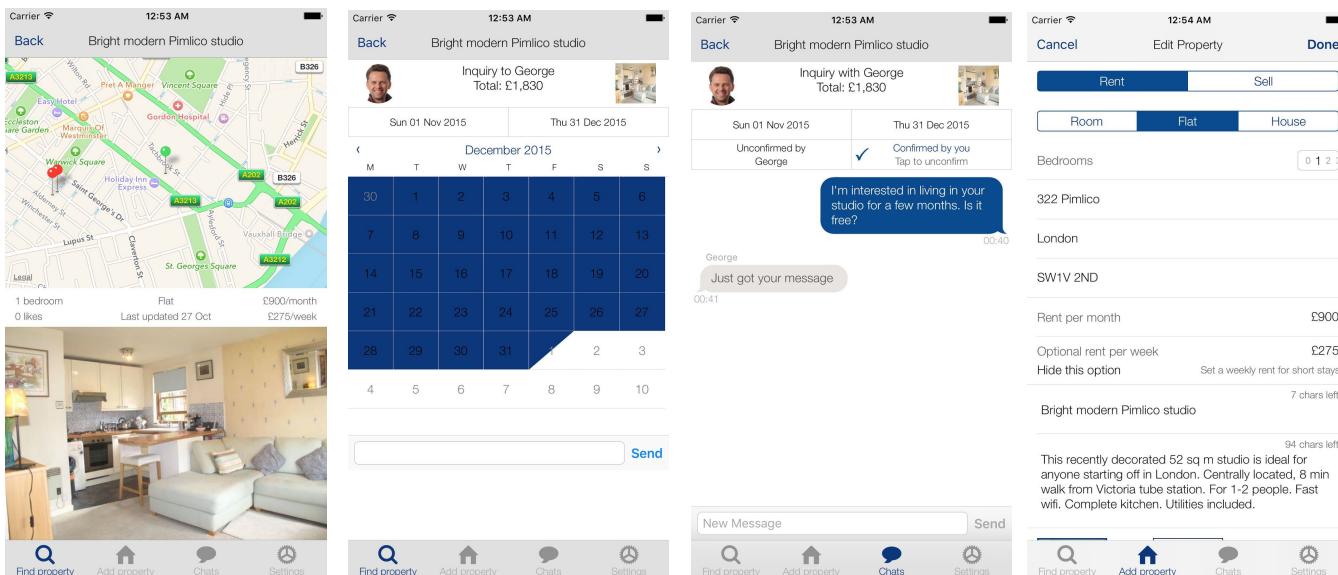


Figure 4. Screenshots from our peer-to-peer property mobile app Qoob. We have had over 350 users.

### 1.3.b Feasibility assessment to date

We have conducted extensive feasibility assessments and operational testing of our app and platform, summarized below. We focused especially on simplicity, ease of use and registering actual user needs.

We first conducted user tests in-house, where we invited paid subjects to use the platform via a web app front end. Each batch of test subjects led to a further iteration of the web app. We then tested the native app by installing it on subjects' phones, who were free to use it in normal operational environments. We collected feedback after several days' use. Again, we did several iterations of these tests.

We have had to date over 350 users, which provides a more statistically significant batch of testers. The results of this led to the three publicly released updates to our app (1.1, 1.2 and 1.3) over the course of the next few months.

#### Timeline of feasibility testing

Aug 2014	Web app I	In-house tests by paid users, allowed to ask questions throughout. Phones were projected on a big screen for us to follow.
Sep 2014	Web app II	In-house tests by paid users, instructions prior to use but not allowed to ask questions afterwards. Projected to big screen.
Oct 2014	Web app II	In-house tests by paid users, no explanation or communication. Sent to projection screen for observation by core team.
Feb 2015	Beta app vs 1	Internal review of first native app concludes app design is too complex. Multiple new versions are deemed sufficiently simple (vs 2-5).
Jun 2015	Beta app vs 6	After extensive designs, first vs of app deemed sufficiently simple.
Aug 2015	Beta app vs 8	160 pass/fail usability tests, checked first by developer, then founders.
Sep 2015	Beta app vs 9	In-house and operational stability testing.
Dec 2015	App Store 1.x	We received user feedback on versions 1.0, 1.1, 1.2 and 1.3.
May 2016	App Store 1.4	We are testing internally vs 1.4, which will be made public.

#### Positioning

Our technology readiness level is 7, for the following reasons:

- Product prototype has been demonstrated in an operational environment
- Our app is available for public download from the App Store
- It has had over 350 downloads, of which 90% were UK, 10% Europe/Asia

### 1.3.c Next steps for product development

**Expand platform base.** Right now Qoob is available for iOS (Apple) phones. We will extend this to the Android operating system and tablets with our subcontractor Synergy. The iOS version will remain our test bed for new features because it has the larger share of paid transactions on mobiles.

**Owner-tenant marketplace.** Right now Qoob lets owners list properties to be searched by tenants. We will add the reverse: let tenants list accommodation requests to be searched by owners. Thus on one platform we will have demand searching supply, and supply searching demand. This will help solve the chicken-and-egg problem of gaining a critical mass of property stock. It will also help those tenants who can't afford to live alone find others with whom to share a property.

**Property-tenant matching.** When the number of search results for properties or tenants exceeds 10, the order in which they appear becomes important if we want to facilitate the best matches before users lose interest. Fink—who has experience in complex optimisation—will lead this using machine learning techniques or simulated annealing.

**Simplicity innovation.** Simplicity is one of our top priorities. Enabling users to add, edit and transact property on a phone in a transparent and intuitive way is a challenge we have so far met. To maintain and improve simplicity as our product develops and we test new features, we will perform in-house user analysis and minimize the navigational information content.

**A/B testing and verified learning.** To confirm our value hypothesis—that our platform is of genuine value to users—we need to constantly assess the correspondence between what we offer, and what users actually find valuable. We will conduct a variety of A/B tests, in which we simultaneously compare the app across a single independent variable, such as lazy login or allowing profile bios.

### 1.3.d Next steps for reaching the market

**University towns and accommodation halls.** To overcome network effects and achieve critical user density, we will leverage our marketing and advertising efforts by focusing on specific regions and sectors. Led by Rybiansky, we will focus on small university towns (Canterbury, Cambridge, Durham). Our targeted campaign will emphasize advertising locally (student newspapers, billboards, flyers) and engaging with local college accommodation officers to seek college-wide adoption.

**Hospitality industry and expat communities.** Second we will focus on towns with large hospitality industries, which tends to include many EU expatriots. Expat communities often seek each other out on social networks to fill a vacancy made by a departed compatriot. Brighton is an ideal starting town, which is unique in having a booming hospitality industry: 11,000 restaurants, hotels and bars in a city with a population of 273,000. This will also be led by Rybiansky.

**Mining property stock.** We will mine for property stock in online classified ads (section 2.1.c), such as Gumtree and Craigslist. Although in relative terms a small fraction of such content relates to property (< 1%), they comprise several thousand property listings. We will contact users directly to invite them to list with us, which is in keeping with the terms and conditions of the sites.

**From saturated hotspots to spontaneous uptake.** Once we have reached critical mass in our focused regions and sectors, we will shift to a national campaign to ignite general uptake. This will require a strong PR campaign with subcontractor Bell Pottinger and in-app and social media advertising.

**Market replication: commercial.** Following the UK, we will expand into Ireland, France, Germany Belgium. We have identified specific regions and demographics to target first for focused market replication: Cork international tech, Heidelberg students, Toulouse students and Brussels EU non-student expats (section 2.2.b). We anticipate three out of four of these will succeed.

**Market replication: technical.** Our mobile app and platform is designed for easy market replication outside of the UK, independent of local real estate procedures. To make our app global-ready, requires a few surgical changes: auto-recognition of the local currency and language; adjustments of character counts to account for language density; and translating the front end text into clear vernacular.

## 1.4 Ambition

### 1.4.a Outcomes, needs and advantages

#### *User need*    *Problem to overcome*

Reduced fees	Estate agencies cost too much for what they provide: either 5–20% of the rent, or a finders fee of one to two months' rent.
Unified market	The market is fragmented: exclusivity clauses mean that signing with one agency can bar access to listings from another. This information bottleneck prevents tenants from finding the best flat for their money, and owners the highest price for their properties.
Global consistency	Differences in estate agency processes across countries make it hard to find housing in a new country prior to arrival.
Short tenancies	There is a gap in the market for short-term rentals (1–6 months) required by students, long-stay visitors and workers on secondment.
Flexible tenancies	There is a vicious circle of fixed-term belief: owners are wary of flexible tenancies because they want quick replacements, and tenants because they may need alternative lodging. Yet more and more people need to move for work or opportunity for an indefinite period.
Autonomy	Agencies offer owners little control in how and to whom their properties are marketed. Worse, there is no way to adapt listings to new information or market changes.
Agility	Agility means being able to quickly seize new opportunities. Finding new housing, which currently takes one to three months, is a major impediment to this.

#### *Our solution*

By getting rid of the middleman in favour of a peer-to-peer model, we reduce fees by an order of magnitude.

Qoob is open to all owners and tenants. Because it costs us very little for someone to list or search for a property on our platform, we have little to lose if they also list elsewhere.

We designed Qoob to be a globally consistent real estate platform. It enables citizens to move within and across countries with ease and confidence.

By letting owners set their own terms real-time in response to interest, Qoob unbinds a market correction in which shorter tenancies at a higher price are found in proportion to demand.

Qoob allows flexible tenancies through real-time monthly contract renewal by paying into escrow. While fixed-term culture won't change overnight, Qoob will catalyse a paradigm shift by offering both flexible supply and demand.

Qoob lets owners set and change their own terms and prices real-time in response to new information, all within minutes from their phone or tablet.

By sidestepping agencies and putting supply, communication and payment under one roof, Qoob minimises the gap between intention and action.

### 1.4.b Novelty

Qoob is the only peer-to-peer mobile property platform in the UK. Here we show how Qoob's five classes of competitors (section 2.1.e) compare across the seven user needs. Our closest competitor scores three, with traditional agencies faring worst.

<i>Available solutions</i>	<i>Reduced fees</i>	<i>Unified market</i>	<i>Global consistency</i>	<i>Short tenancies</i>	<i>Flexible tenancies</i>	<i>Autonomy</i>	<i>Agility</i>
Traditional estate agencies							
Online agencies	✓						
Agency curation websites		✓					
Online classifieds	✓			✓		✓	
Institutional accommodation	✓			✓			
Qoob	✓	✓	✓	✓	✓	✓	✓

# 2 Impact

## 2.1 Expected impacts

### 2.1.a Users and their needs

To accelerate uptake and the commercialization of our product, we differentiate between early users and final users. Early users make up a smaller fraction of the total market, but they are more forgiving of mistakes; they are key to generating early revenue. They also provide us with validated learning by testing our minimum viable product. As our product matures and we overcome network effects, we will increasingly turn to attracting final users.

#### *Early users*

*General definition.* ‘The customers who feel the need for the product most acutely. [They] tend to be more forgiving of mistakes and are especially eager to give feedback.’ (Eric Ries, *The Lean Startup*)

*Specifically for our product.* Tenants who are unable or unwilling to make use of estate agents or are committed to peer-to-peer platforms. Owners who have had bad experiences with agencies.

#### *Targeted user*

Economic migrants  
Foreign university students  
First-time renters  
Tech-savvy early adopters  
Visiting students (term abroad)  
Had bad agency experience  
Colleges and trade schools

#### *Specific user needs*

Unfamiliar with the target rental market; weary of bureaucracy  
Need to find housing in target country from their home country  
Nervous of over committing to a fixed contract; cost-conscious  
Prefer apps to websites; expect apps to integrate with social media  
Need cheap and short term (1-6 months) accommodation  
Expect efficiency, transparency and autonomy  
Need to provide for a whole ecosystem of tenants en masse, meaning network effects are less important

#### *Final users*

*General definition.* The customers who are less risk-tolerant and who typically conform to network effects: once a product has been adopted by a sufficient number, they are likely to follow the crowd.

*Specifically for our product.* Tenants who are not bound to live in one place, or have high mobility needs. Owners who want more autonomy over who they take and what they charge. Both tenants and owners who are determined to find a more affordable alternative.

#### *Targeted user*

Domestic university students  
Interns, new employees  
New graduates  
Single persons  
Couples without children  
Trans-national co. employees

#### *Specific user needs*

Cost conscious; obliged to pool resources and share a flat  
Unsure of how long they will need to stay in a new area  
Yet to throw down roots; open to new cities; unfamiliar with agents  
Tend to have fewer bulk possessions and are thus more agile  
Unrestricted by the need to school their children in the same district  
Obliged to make one-month-plus visits to foreign headquarters

#### *Short-tenancy bias*

We are most likely to attract potential customers when they have moving on their mind. Thus with each move a potential customer makes, we have another chance to convince him to adopt our product. We expect to find an inverse relationship between the size of our user group and the average length of tenancy for that group. This means we will especially seek out quick-turnover segments of the market.

## 2.1.b Why users will pay

The seven user needs that we address in section 1.4.a translate into seven user benefits which users will be willing to pay for.

It is not always providing for the underlying user need that is valued by the user—rather the perception it creates. For example, providing a more unified market is perceived by the user as more accommodation choices.

### *Benefit*

### *Why users will value it*

Reduced fees

Our app is free to download and use. Only when tenants actually rent is there a charge to both sides of 1%: tenants pay 101% of the listed rate, and owners get 99% of the listed rate. By comparison, the cut associated with traditional agencies is 5-20%. Independently and optionally, Qoob charges a nominal fee of £25 for a tenancy agreement; a typical agency would charge £150 to £300 to provide this.

More choice  
*(because it addresses a unified market)*

Because Qoob unifies the fragmented market, it offers access to a bigger pool of accommodation and a bigger pool of potential tenants. Both can be contacted directly for more information. Ultimately users will favourably compare this to the smaller, disjoint portfolios of competitors.

Familiarity  
*(because it addresses global consistency)*

Anyone who uses Qoob in one city or country will find it works the same way in any other city or country. This establishes a brand which users trust. Tenants can plan their accommodation before arrival, which is of clear value compared to the alternative.

Short tenancies

There is a significant gap in the market for short (1-6 month) tenancies. As the main provider of short tenancies, users will be willing to pay Qoob a the small surcharge above instead of using a more expensive holiday letting or hotel.

Flexible tenancies

For those who are unsure of the duration of their stay, or are waiting for more permanent accommodation to become available, the option of a monthly renewable tenancy provides real value.

More control  
*(because it addresses autonomy)*

Qoob lets owners advertise their property as they see fit: choosing their photos, highlighting their USPs, and setting their price. By checking viewer traffic, they can experiment with different photos, text and prices. And according to recent UK YouGov research, 55% of tenants would rather conduct their own viewings than do so with estate agents.

Convenience  
*(because it addresses agility)*

Qoob makes it easy for owners to put their property on the market, even if they are not sure if and how they wish to rent it. Owners can add their listing, put it on the map and fix a price—all in a few minutes. New properties can immediately be browsed by tenants. In this way owners can gauge interest before committing to rent out, and tenants can maintain a real-time overview of the alternatives on the market. Qoob offers on a single platform for messaging, rental payment, transaction support, and sponsored recommendations to trusted solicitors, surveyors and tradesmen.

## 2.1.c Competitors

Overall there is no dominant cross-country brand and little attempt to disintermediate. The biggest threat the competition poses to us is not the competitors individually, but rather the monopolistic agreements between them which requires users to list with an agency. The UK Competition and Markets Authority recently considered a forced breakup, concluding instead that a new peer-to-peer business model, like ours, could do the job for them (see section 2.2.f for details). Therefore our goal is not to compete directly with the companies currently operating, but rather to create a ‘new demand in an uncontested market space, or a Blue Ocean’, in the words of *Blue Ocean Strategy*.

### *Traditional estate agencies*

Threat level: medium

The large majority of European rentals are mediated through traditional estate agents. Most of these agencies are local in reach, focusing on a particular region (Paris vs Lille) or market segment (low-end vs high-end; city vs country). Traditional letting agents show would-be tenants properties of interest in person and, once a deal is made, act as a mediator between the owner and tenant, collect rent, and ensure that utilities are maintained. For this, they typically take a significant cut (5–20%) of the rent. What’s more, they demand a significant start-up fee, typically three months rent, in the form of deposit, advance rent and agency fees. Apart from showing their properties online, traditional agencies have been slow to respond to information and communication technology.

### *Online agencies*

*Examples:* Purplebricks (UK); Logic-Immo (France).

Threat level: medium

Some traditional, and a few emerging, estate agents are abandoning their physical presence on the high street in favour of an online-only model. With no rent and fewer staff, they tend to offer lower fees, often fixed rate, but retain the middleman model. Like the traditional high street agents above, online agents are able to list their properties on curator sites below, like Rightmove and Zoopla.

### *Agency curation websites*

*Examples:* Immobiliare.it (Italy and Poland); Rightmove, Zoopla (UK).

Threat level: medium

A growing trend over the last decade is platforms that curate the properties listed by agencies. These are effective online property search engines. The dominant UK player is Rightmove, owned by a conglomerate of traditional estate agents, which puts interested users directly in touch with the agency representing the property. Crucially, only properties represented by an agency are allowed to list on such sites; owners who want to rent or sell their property peer-to-peer are prohibited.

### *Online classifieds*

*Examples:* Gumtree (UK, Germany & France); Slando (Eastern Europe); Craigslist.

Threat level: low

Like their hard-copy newspapers ancestors, these sites list all kinds of goods and services for sale and rent, including accommodation; they do not normally specialize. Europe-founded and now dominant Gumtree operates in the UK, Germany, France and other countries. Slando is the leading Eastern Europe online classified company (it was owned by Gumtree before being sold to Naspers). Such sites tend to offer lower-end accommodation specifically aimed at the peer-to-peer market, but the market penetration is marginal and the quality and terms are haphazard. Because they are not tailored to accommodation specifically, these competitors offer few options and are a low threat.

### *Institutional accommodation*

*Examples:* Cité universitaire (France); Goodenough College (UK).

Threat level: negligible

At the finest scale of agency, there are the accommodation officers of university colleges, polytechnics, trade and language schools, and multi-university student blocks. All of these tend to organize accommodation on an *ad hoc* basis, typically with an in-house database of internal dormitory blocks and local, privately-owned flats which rent out single rooms. To operate at capacity and maximise income, these institutions are willing to consider unsolicited accommodation requests, especially in the summer. This is a source for short (1–3 month) rentals—but only if a potential tenant is willing to invest considerable time calling round the fragmented supply. Our team has used this source of housing personally to find accommodation for visiting interns and it was highly inefficient.

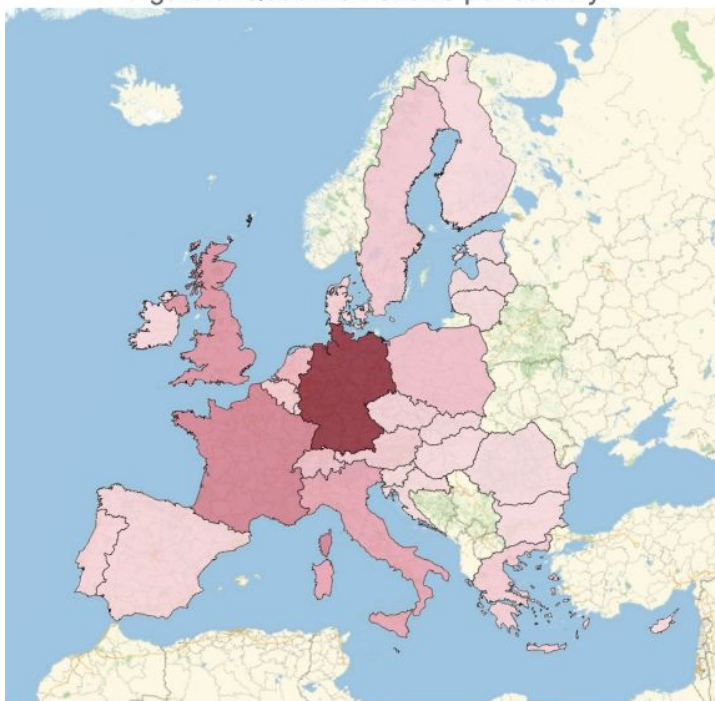
## 2.1.d Market

### Market size

The potential market is very big, with 96 million tenants paying market rent across Europe.

We can see how this varies across the continent. populations living in market-price accommodation across Europe is shown in Table 1. From the data, we see that Germany and France are candidate markets for market replication beyond the UK. While the statistics used to measure domestic rental varies by country, the market clearly is global.

Figure 5. Qoob market size per country



Country	Market renters (%)	Market renters (millions)
Germany	39.6	31.8
France	19.3	13.0
UK	17.1	10.8
Italy	14.3	8.5
Netherlands	32.6	5.5
Poland	12.4	4.7
Switzerland	51.8	4.2
Sweden	30.4	2.9
Austria	27.2	2.3
Belgium	19.3	2.2
Greece	20.0	2.2
Denmark	36.6	2.0
Czech Republic	16.6	1.7
Portugal	12.4	1.2
Spain	2.1	0.9
Ireland	16.1	0.7
Finland	10.9	0.5
Slovakia	7.9	0.4
Hungary	3.8	0.3
Bulgaria	2.6	0.1
Cyprus	11.5	0.1
Latvia	8.7	0.1
Luxembourg	22.0	0.1
Romania	0.7	0.1
Slovenia	5.9	0.1
Croatia	1.8	0.07
Estonia	3.9	0.05
Lithuania	1.3	0.03
Malta	2.0	0.008
TOTAL	2.0	96.3

### Market growth

The size of the market is growing: more people are renting as opposed to buying, and their tenancies are getting shorter, meaning they are moving more often. For example, recent research by PriceWaterhouseCoopers (“Generation Rent: London to become a city of renters by 2025”, *Daily Telegraph*, 16 Feb 2016) indicates that in London, 60% of the accommodation will be rentals by 2025. This amounts to a 24% increase in London rentals, and is part of a 14% increase in UK rentals overall by the same year.

Similar growth figures can be found for the countries of the specific cities we selected for our focused campaign.

## 2.1.e Alignment and impact to our company

N.B. To avoid any confusion, we remind the reader that Qoob is the name of our property transaction product, and Qoob Limited is the name of our company. Qoob Limited makes Qoob as well as other products, described below.

### *Our company*

Name	Qoob Limited
Founded	2014
Headquarters	London
Goal	Qoob Limited makes innovative mobile apps for collaboration, collective creativity and peer-to-peer solutions. It believes in participation as a means of innovation.

### *Qoob Limited team skills*

app design	Between them, the Qoob Limited team has developed several mobile apps and technology platforms, including for a time the number one most popular free app for the iPhone.
graphic design	
property markets	
statistical physics	
digital advertising	
software engineering	
complex optimisation	
property management	
technology management	
mathematics of simplicity	

### *Company-product alignment*

Qoob Limited has released three products, all of which promote new models of participation. Our property transaction platform described here incorporates the company's underlying philosophy of participation as a means of innovation, and we believe it is the product with the biggest market willing to pay.

Qoob Limited has also made two other apps, available for the Android OS, which allows multiple anonymous users to participate in collective creativity (writing and digital illustration) and collective problem solving (games and puzzles).

### *Product history*

Our property app, Qoob, was first developed by scientists at the London Institute for Mathematical Sciences (LIMS), a physics and mathematics research institute. Qoob was awarded an incubation by LIMS Ventures, the technology transfer subsidiary of LIMS. Qoob is entirely developed and commercialized by Qoob Limited.

### *Growth potential of our product.*

The growth potential for our product is significant. As we show in section 2.2.b show, if we hit our targets of between 2% and 7% for the specific sectors in our six EU cities, we would generate income of £1,294,000. This does not take into account replication in other cities or national uptake. Nor does it take into account the advertising link potential of our value chain.

The market for a flexible peer-to-peer rental platform in Europe and beyond is very big, and the first company to get it right will make a windfall. We believe that an EU company, Qoob, should and will get there first.

### *Knock-on effects of SME Instrument funding*

We have attracted strong interest from the potential investors we approached. They believe in our value hypothesis; they want to see confirmation of our growth hypothesis. With support from the SME Inst Phase 2 we will demonstrate this and attract private investment for further and future expansion.



## 2.1.f Funding requirements and coaching

### *Funding requirements*

The total funding that we need for Phase 2 is €1,700,000. We are requesting 70%, or €1,190,000, of this as the EU contribution. The remaining 30% will come from the following:

Founder investment	€130,000
LIMS Ventures (which own 20% of Qoob Ltd)	€180,000
LIMS (in the form of central London office space)	€80,000
Commercialization during the first 18 months (section 2.2.b)	€120,000

### *Coaching service*

We plan on using the coaching service. In particular we hope to get help on:

- honing and practising our pitch to potential new investors;
- creating an effective marketing strategy, building on our prior newspaper/social media coverage;
- advice on how to best time market replication in other countries;
- potential recruitment agencies for finding local marketers for EU replication.

## 2.2 Measures to maximise impacts

### 2.2.a Exploitation: value chains

*Rental payment escrow.* While our product is currently free, we will take 1% of rent on both the owner and tenant side of rent paid by escrow through our app. So the tenant would pay 101% of the advertised price, and the owner would receive 99% of the advertised price, giving us a 2% cut. We have devised a method for paying rent from a phone, which can be part of a fixed-term contract or can be used to auto-renew a flexible contract. We allow both PayPal and bank cards; we will need to incorporate Apple Pay. We will have to satisfy certain financial regulations set by PayPal and Apple Pay, such as showing good faith over a few-month period. Lynch and Dorrington have experience with such commercial transaction technology.

*Automatically generated contracts.* We will automatically generate tenancy agreements between owners and tenants for a fixed fee (£25). We have met with the UK head of Rocket Lawyer, a provider of modular commoditized legal services, to possibly assist with this. Any such arrangement would likely involve profit sharing, in which case the free might be nominally higher to cover the Rocket Lawyer portion.

*Selling advertising.* A supplementary path to revenue is to add to the app a list of recommended tradesmen and service providers: property lawyers, energy performance certifiers, surveyors, builders, plumbers and electricians. Such providers would pay to be included on the list. This advertising revenue could take the form of conventional ads, or a more integrated list of 'sponsored' suggestions which could be user-reviewed.

*Customer service.* Though not an explicit value chain, part and parcel with the above will be customer service. With our current user base, we manage inquiries and appeals for clarification sent to us by users via an internal app help option. As we expand within the UK and across Europe, however, we will need to hire a dedicated staff member to provide customer service. We will likely phase this in two stages: a part-time employee but responsive continuously; and within 6 to 9 months a full-time assistant. We are currently receiving inquiries from about 4% of users, though we expect this to be higher amongst users paying fees.

## 2.2.b Exploitation: market uptake

### *Focused towns-sectors*

During the first 18 months (see WP2 and WP3), we will wage a focused and multi-pronged campaign on specific town and sectors, which is key to achieving a critical mass of users within a single ecosystem such that our platform can become self-sustaining. The goal is to ignite national uptake by reaching percolation threshold through concentrating our marketing and advertising campaign, much like focusing sunlight is necessary to produce ignition of tinder.

<i>Town</i>	<i>Canterbury</i>	<i>Brighton</i>	<i>Cork</i>	<i>Heidelberg</i>	<i>Toulouse</i>	<i>Brussels</i>
Target user sector	Students	Hospitality	Intl tech.	Students	Students	EU expats
Population	52,000	273,000	119,000	152,000	461,000	1,118,000
Size of target sector	31,000	16,000	9,000	31,000	103,000	140,000
Est. new rentals/year	38,000	10,000	5,000	22,000	72,000	95,000
Target adoption rate	4%	7%	6%	4%	3%	2%
Average rent (£)	425	£815	£1100	£400	£370	£930
Est. total income (£)	141,360	108,780	82,950	74,360	440,856	445,830

This yields a total annual income of £1,294,000, against directly allocated costs of £177,000. The income comes from 1% of rent on both the tenant and owner side, and a £25 fee for contracts for the estimated half of users who choose to get one. Depending on results, these concentrated efforts can be replicated in other EU towns and sectors, or we can shift to a national campaign. The profit is comparable to the total budget for this proposal.

To illustrate this in more detail, we zoom in on the two cities of Canterbury and Brighton.

***Canterbury: students.*** This small town is unique in that its population consists mainly of students. It has a population of 55,00, of which 31,000 are students at its four universities and various colleges. Most of these students are staying in private rented accommodation which they rent once a year or more, so turnover is high.

***Brighton: hospitality.*** Brighton is distinctive in that it has a strong sector-specific population: a large hospitality industry (11,000 hotels, restaurants and bars) which employs a high concentration of foreign EU citizens. This means that rental turnover is high, and it also supports our goal of harnessing the significant customer base of intra-EU movers (section 1.1.c).

### *Typical campaign and cost: Canterbury*

<i>Channel</i>	<i>Notes</i>	<i>Traffic</i>	<i>Costs</i>
Local billboards	Selected places with high impression rate	31,000	£5,450
Canterbury Times	Local newspaper (print and online version)	15,000	£1,150
Inquirelive	Kent student newspaper, circulation of 20,000	20,000	£750
Leaflets	Qoob flyers sent door-to-door (16,000 homes)	16,000	£1,270
Google Adwords	Targeted location and demographic	47,000	£1,800
Facebook Ads	Targeted location and demographic	45,000	£1,500
Personnel	4 × 3 person-months		£23,400
<b>Total cost</b>			<b>£35,320</b>

### *Campaign income worked out for Canterbury and Brighton*

Assuming we hit our target adoption rates of 4% and 7%, respectively, revenue would be as follows. Other totals for the cities above are calculated in a similar way.

<i>Value chain</i>	<i>Canterbury</i>	<i>Brighton</i>
50% purchase of built-in contract (£25)	£38,000	£17,500
Monthly rent by escrow × 8 (1% fee, not inc. summer)	£103,360	£45,640
<b>Total income</b>	<b>£141,360</b>	<b>£108,780</b>

## 2.2.c Exploitation: dissemination and communication

Dissemination (D) is about promoting our product through PR, social media and advertising; communication (C) is about promoting our product in other ways.

<i>Activity</i>	<i>Audience</i>	<i>How we will do it</i>												
User-generated growth (D)	Users and friends of users	Our dissemination strategy is tightly coupled with our growth hypothesis, namely, that use of the product creates more use. Qoob will be the first port-of-call for listing and finding properties on a national, EU and global level. Before we overcome network effects, early users will want to share their Qoob listing on other platforms to be seen by friends. The goal is to maximise the number of click-backs to push the number of new users generated by a user past one, the critical value.												
Social media sharing (D)	Market base on social media sites	We will make possible and extend the above by building integration with social media, focusing on compatibility with the leading sites, such as Twitter, Facebook (which Qoob currently supports), Instagram (indirectly due to how Instagram regulates content) and WhatsApp. We will also add sharing via SMS and email.												
Advertising (D)	Third-party service providers	We will advertise related third-party services on our app: legal services, energy certification, surveyors, builders, plumbers and electricians. Format: conventional ads, or integrated list of sponsored suggestions which could form part of the platform ecosystem by incorporating third-party reviews by users.												
Property and sharing economy conferences (C)	Property market leaders; investors	<table border="1"> <tbody> <tr> <td>Landlord Expo</td> <td>2017</td> <td>Nottingham, UK</td> </tr> <tr> <td>Landlord&amp;Letting show</td> <td>2017</td> <td>London,UK</td> </tr> <tr> <td>Collaborative Economy</td> <td>2016</td> <td>San Francisco (tbc)</td> </tr> <tr> <td>Noah Leaders Connected</td> <td>2017</td> <td>London; Berlin</td> </tr> </tbody> </table>	Landlord Expo	2017	Nottingham, UK	Landlord&Letting show	2017	London,UK	Collaborative Economy	2016	San Francisco (tbc)	Noah Leaders Connected	2017	London; Berlin
Landlord Expo	2017	Nottingham, UK												
Landlord&Letting show	2017	London,UK												
Collaborative Economy	2016	San Francisco (tbc)												
Noah Leaders Connected	2017	London; Berlin												
Pitching for investment (C)	VC firms, investors	As Qoob expands into Europe and beyond, we will seek support from venture capital firms and angel investors. We will pitch to investors, such as Balderton Capital (which invited us to their 'Dragon's Den' competition) with the intention of funding more rapid expansion. The SME Instrument mentoring programme will help us hone our skills in this area.												
Other P2P platforms (C)	Potential mentors and partners	We will meet with leaders of other peer-to-peer platforms for: hands-on advice on practical problems; building trust corridors to potential investors; and potential partners in delivering our product. We already met with the UK head of Rocket Lawyer, an online legal technology company (see 3.3.b), and the CEO of Zopa, Europe's largest peer-to-peer lending service.												
Intern, student recruitment (C)	Interns and potential long-term employees	Will will host three-month intern projects on app design or market replication. Because Qoob was incubated by the London Institute, we can use its research intern programme. Interns will be guided of one of our core team. This will attract bright minds to work on Qoob without committing a lot of resources.												

## 2.2.d Beyond Phase 2

*International expansion.* Beyond Phase 2 we will continue our EU expansion beyond Ireland, France and Germany, and also enter North America. We recently visited a potential U.S. partner in the Bay Area to discuss the structure of U.S. competition and the logistics of market entry.

**Policy making.** Studying the rapid expansion of Uber and Airbnb into new territories, we believe that post-Phase 2 we will need to prioritize policy making. Technological evolution can now outpace legislative reform, causing tension between innovative companies, local authorities and disrupted competitors. Lobbyists and legal teams are a necessary component of rapid growth and technological disruption. Maintaining Qoob’s freedom to operate in territories where it exists, and acquiring it through policy making in those where it doesn’t, will be a key part of our strategy two years from now.

**Simplifying our revenue model.** On the basis of data collected during Phase 2, we will further modify our revenue model. If we establish a strong brand identity based on trust and transparency, we will *simplify* our revenue model, removing some of the components in the value chain. A pared down value chain makes market replication easier because it reduces the number of new cultural and institutional frameworks to understand. It also promotes global consistency.

**Financial diligence.** We will hold rent in escrow for short periods between when the tenant deposits and the owner is paid. When the turnover from this value chain is significant, we will consider our financial fiduciary duties—e.g., limited volatility and insurance—as well as means of exploiting this steady-state surplus.

## 2.2.e Knowledge protection

Qoob owns all of the exploitable IP involved in this proposal.

In devising our plan to protect IP and exploit results, we read the reports *IP Management in Horizon 2020* and *Commission recommendation on the management of IP in knowledge transfer activities*.

### Potential IP

### Status of protection

IP resulting from R&D

IP belongs to Qoob  
(LIMS Ventures claims none)

Mobile app (code, graphics, visual content, text)

Qoob owns copyright

Outmoded web app (source code, graphics, text)

Qoob owns copyright

Copyright for the user-generated photos, text and other database information uploaded to Qoob

Protected for 15 years by Database Directive (96/9/EC of European Parliament)

Qoob logo (three adjoining parallelograms in shades of grey beside Helvetica Neue Light ‘qoob’)

Qoob is seeking trademark protection in the UK

‘Qoob’ name and the Qoob slogan, ‘Rent, buy and sell property directly from your phone’.

Qoob is seeking trademark protection in the UK

Global trademark protection

We will extend trademark as and when we enter new territories (activity in a territory is a prerequisite for trademark protection)

Patents on unique features of our app: auto-renew payment for rentals, method of matching users to properties (rather than vice-versa).

We have not found any competing patents regarding our property transaction methods which could impede us. We will file appropriate patents of our own by Dec 2016.

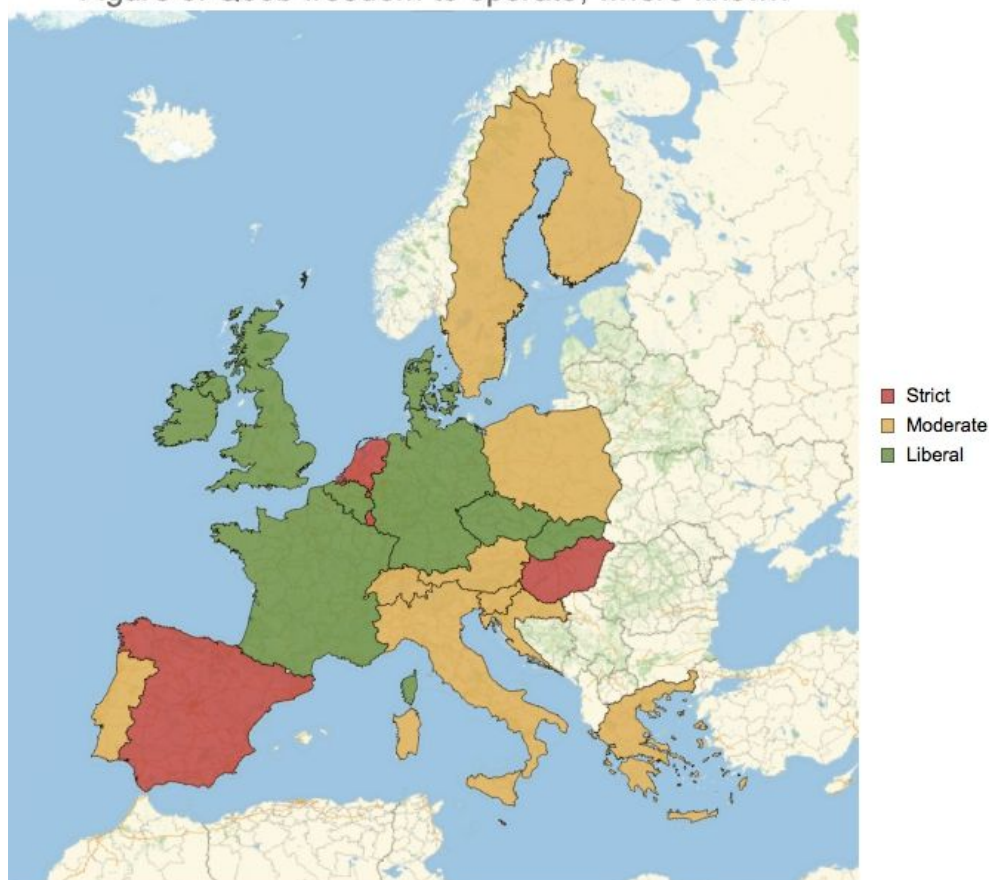
**Open research data scheme.** We will not take part in the optional pilot Open Research Data scheme.

## 2.2.f Freedom to operate

Qoob has freedom to operate in all of the EU countries in which we plan to operate in Phase 2: UK, Ireland, France, Germany and Belgium.

We show the freedom to operate peer-to-peer property transactions across the EU in Figure 6, for those countries for which we have data. In some non-liberal (non-green) countries, this is a grey area. Given the rapid pace of technological innovation and the interplay between citizens, government and business, legislation is not always capable of keeping up with development. This has recently been witnessed in the case of Uber and Airbnb, both of which have (explicitly and implicitly) successfully influenced government legislation and policy. After this Phase 2, we anticipate lobbying in those countries where Qoob does not have freedom to operate.

Figure 6. Qoob freedom to operate, where known



It is instructive to note that until recently our product was impeded by UK legislation. This changed during the last two years when British Parliament repealed the Property Misdescriptions Act 1991 and amended the Estate Agents Act 1979. These changes in effect shifted the responsibility around the honest marketing of properties from online intermediaries to the property owners. In brief, the Government predicted that:

- Platforms like ours will naturally come to break the dominance of traditional agency cartels like Rightmove and Primelocation;
- If not, they'll jump in and break it themselves; and
- A market this big can sustain several players.

We expect to see a similar reduction of regulations in some of those countries that still have strict policies.

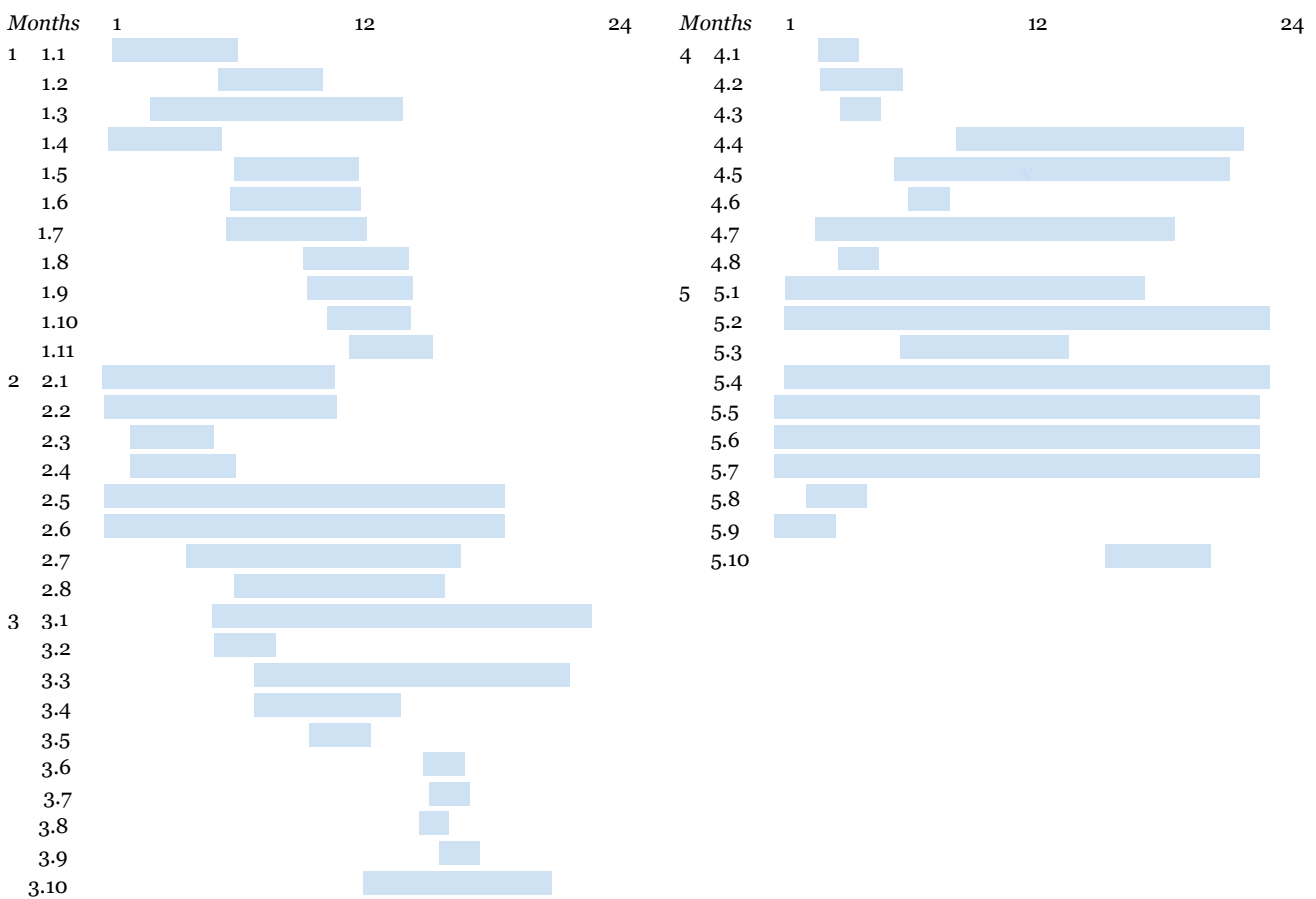
# 3 Implementation

## 3.1 Work plan

### 3.1.a Timeline of work packages and tasks

<i>Work package</i>	<i>Lead person</i>	<i>Person months</i>	<i>Start month</i>	<i>End month</i>
WP1 Confirming our value hypothesis & app design	TF	30	1	15
WP2 Uptake and local network effects	RR	27	1	18
WP3 Confirming our growth hypothesis & market replication	RR+BL	33	6	24
WP4 Commercialization of peer-to-peer property transactions	BL	39	3	24
WP5 Management and communication activities	TF	21	1	24

TF = T. Fink BL = B. Lynch RR = R. Rybiansky



### 3.1.b Deliverables

<i>Deliverable</i>	<i>WP</i>	<i>Type</i>	<i>Dissem. level</i>	<i>Delivery month</i>
D1.1 Android and tablet interfaces to our platform.	1	Oth	PU	6
D1.2 Improved property search and owner-tenant matching on all interfaces.	1	Oth	PU	8
D2.1 Report on marketing campaigns procedure and results in Canterbury and Brighton, capable of replication.	2	R	PU	12
D2.2 Report on the conversion and uptake of online classified ads to properties on our platform.	2	R	PU	18

D3.1	Report on market replication in 3 of our 4 EU territories, inc. technical and commercial aspects.	3	R	PU	24
D3.2	Quantitative results and report of app innovation management (verified learning via A/B testing).	3	R	PU	20
D4.1	iOS and Android app with functioning escrow rent payment and auto-renew of contract.	4	Dec	PU	15
D4.2	Report on commercialization progress from: escrow percentage, advertising, contracts.	4	R	PU	20
D5.1	Report of our PR campaign (inc. press clippings) with subcontractor Bell Pottinger	5	R	PU	21
D5.2	Written and/or slide presentation for pitching to investors after revision post coaching.	5	R	PU	18

LEGEND R = document, report Dec = websites, press/media Oth = software PU = Public

### 3.1.c WP1 Confirming our value hypothesis and app design Months 1-15

#### *Objectives*

- 1.1 Make our platform more widely available by launching Android and tablet versions.
- 1.2 Improve property search and owner-tenant matching by iterative cycles of verified learning.

<i>Task</i>	<i>Description</i>
1.1 Create Android version	Replicate our iOS mobile app for the Android operating system with our subcontractor Synergy.
1.2 Validate Android version	In house and operational testing/validation of Android version.
1.3 Customise for iPad and tablets	Customise iOS version for the iPad, and extend interface to other tablets, with subcontractor Synergy.
1.4 Owner-tenant marketplace	Add the option for tenants to add their tenancy request to be browsed by owners.
1.5 Tenant-tenant sharing	Add the option for tenants team up with other tenants to then seek shared accommodation as a unit.
1.6 Property-tenant matching	For search results with 10+ hits, use machine learning or simulated annealing on user data to order matches by relevance.
1.7 Simplicity: navigation	Calculate and minimise the navigational information content: specifically, the extent to which each attribute shrinks the field. Improve/drop low content attributes.
1.8 Simplicity: user testing	In-house user testing (with interface projected to a large screen) to to further optimize clarity, bottlenecks, stickiness.
1.9 A/B testing capability	Add the option for simultaneous A/B testing. The time of download modulo 2 will toggle A vs B, creating unbiased samples.
1.10 A/B testing: variables	Simultaneously compare the app in the same region across a single independent variable, e.g.: ability to filter by common interests; lazy login; likes vs shares.
1.11 Refine search capability	Let accommodation searches be filtered by property attributes, and tenant searches by profile attributes.

### 3.1.d WP2 Uptake and local network effects Months 1-18

#### *Objectives*

- 2.1 Achieve market penetration through local campaigns targeting students and hospitality staff.
- 2.2 Secure early adopters and ignite general uptake in London and across the UK.

2.1 Canterbury/Brighton: visual advertising	Select advertising locations (billboards, city-centre platforms) with high impressions to match our targeted users.
2.2 Canterbury/Brighton: print and web advertising	Promote our product in local newspapers and student info channels with unique ad campaigns customized to the audience.
2.3 Canterbury: accommodation officers	Contact college accommodation officers to arrange for a college- or university-wide adoption of our product.
2.4 Canterbury/Brighton: landlords	Contact landlords, creating our landlords portfolio.
2.5 Canterbury/Brighton: social media advertising	Conduct a precision Facebook targeted SEO to find the right recipe for targeting potential users sorted by demography, interest and behaviours.
2.6 In-app advertising	Google Adwords: our early tests clearly show this to be the most efficient way to reach with high impressions our targeted audience.
2.7 Online classified ads: verify multi-listing	Verify that terms and conditions of online classified ads portal to allow users to simultaneously list with us.
2.8 Online classified ads: invite to list	Contact relevant Gumtree/Craigslist/other classified users inviting them to list with our platform.

### 3.1.e WP3 Confirming our growth hypothesis and market replication

#### *Objectives*

Months 6-24

3.1 Create a viral growth engine whereby users generate new users by sharing property listings.

3.2 Achieve market replication in specific EU countries: Ireland, Germany, France and Belgium..

3.1 Market replication: commercial	Investigate online purchase tendencies in our specified EU territories.
3.2 First market replication: advertise	Advertise for employees (part-time) in Heidelberg, Cork, Toulouse and Brussels to lead focused marketing campaign.
3.3 First market replication: hire	Hire native employees. One week training in London. Travel to Heidelberg, Cork, Toulouse and Brussels to initiate campaign.
3.4 Market replication: continental EU cities	A member of our core team will be allocated to form, develop and manage new team responsible for smooth replication.
3.5 Design changes for international app	Adapt to auto-recognize local currency and language and translate app text into clear vernacular; adjust character counts.
3.6 Social media sharing: Instagram	Add sharing of property to Instagram (currently we have a temporary fix).
3.7 Custom Instagram Qoob accounts	Automatically generate Instagram library of all property photos uploaded to our platform. Possibly group by category.
3.8 Social media: SMS	Add sharing of property to via SMS and potentially Whatsapp.
3.9 Social media: analysis of click-back	Analyze click-back from those who see the user-shared post, thereby helping to increase the number of new user generation per current user past the critical value of one.
3.10 A/B testing for growth	For example: inviting friends, likes vs shares.

### 3.1.f WP4 Commercialization of peer-to-peer property transactions

#### *Objectives*

Months 3-24

4.1 Integrate financial transacting whereby users can pay rent through our escrow system.

4.2 Commercialize by charging a rent premium, selling custom contracts and advertising services.

<i>Task</i>	<i>Description</i>
4.1 Escrow regulations	Before our escrow turnover exceeds
4.2 Add rent transacting to app	Design and build a means of paying rent to the owner, which involves the tenant paying Qoob, and Qoob paying the owner the same minus a small fee at a later fixed date.



4.3	Add rent extension option to app	This requires careful interaction with the calendar, and a confirmation handshake from both partners.
4.4	Customer service staff	If and when queries exceed 50 per week, will recruit a customer service assistant to answer question on usability, disputes about upkeep/utilities, timing of escrow payouts, and so on.
4.5	Identifying advertisers	Identify suitable and willing to pay candidates for advertising: property lawyers, energy certifications, surveyors, builders, plumbers, electricians.
4.6	Add advert component to app	Design and build advertising component with subcontractor Synergy.
4.7	Rocket Lawyer collaboration	Propose using Rocket Lawyer's automated tenancy agreement module in a profit sharing scheme, which we then provide to our platform users.
4.8	Add contract component to app	Using user data already collected in their profile, provide the option to automatically generating a tenancy agreement, which the tenant and owner and electronically sign through the app.

### 3.1.g WP5 Management and communication activities

Months 1-24

#### Objectives

- 5.1 Coordinate development responsibilities between core team members and interns and personnel.
- 5.2 Develop and launch PR campaign on national and EU scales..

<i>Task</i>	<i>Description</i>
5.1 Mentoring service	We will use the SME Instrument mentoring service to: hone our new investor pitch; creating an effective marketing strategies; and modularize our path to market replication (new cities, countries).
5.2 Pitching	We will continue and expand our effort to seek angel and venture capital investment.
5.3 Conferences	Disseminate our company and product at networking conferences, such as Noah Leaders Connected in London and Berlin.
5.4 Branding	As we move from early adopters to mainstream users, instilling trust in our user base will increase in importance, e.g., for those hesitant to pay rent through our escrow account. With subcontractor Bell Pottinger, we will shift our brand and competitor base from students and first-movers to mainstream society.
5.5 Coordinate product development	Project leader TF will coordinate the development activity of the core team members on their relevant WPs and identify complementarities between teams for tackling new problems.
5.6 Coordinate meetings	TF assisted by RR will organize regular meetings with our team and subcontractors Bell Pottinger and Synergy.
5.7 Coordinate reports	TF will lead collecting material for and delivering the project reports.
5.8 LIMS interns	Recruit internships with the London Institute to work on aspects of our product (e.g., effective matching, speed of loading, local uptake).
5.9 General interns	Advertise for and hire interns for 3-9 month terms for help on marketing campaign, customer service.
5.10 Audit certificate	Comply with H2020 audit requirements after hitting €325k threshold.

## 3.2 Management, milestones and procedures

### 3.2.a Management structure

*Lead team.* The lead team is made up of Fink, Rybiansky, Lynch and Dorrington, lead by Fink. Their individuals contributions are described in section 3.3.

*Operations manager.* We will appoint a project operations officer. They are responsible for: hiring and assisting staff; logistics of our marketing campaign; ensuring budgets are correctly allocated;

synchronising the work packages; assisting with the H2020 annual reports; and complying with the audit and the audit certificate.

*Work package leaders.* The five work packages will be lead as follows: WP1 Fink; WP2 Rybiansky; WP 3 Rybiansky/Lynch; WP4 Lynch; WP5 Fink. This is also described in section 3.1.a.

*Decision-making mechanisms.* The four team leaders and the operations manager will form a board to ensure that the work is successfully implemented, subject to the risks and mitigations below. The board will ensure that the work packages are aligned and any interdependencies are addressed. Final decision making will rest with the chair of the board, Fink.

*Appropriateness of mechanisms.* The structure and mechanisms described here are in proportion to the size and complexity of our team. Our team leaders have worked together over the last one to two years (our effective Phase 1) to create our technology platform and app. We have distributed responsibility and have prepared detailed tasks (sections 3.1.c to 3.1.g) within the work packages and set milestones (3.2.b) which will assist us in pacing and charting our progress appropriately.

## 3.2.b Milestones

<i>Milestone</i>	<i>Means of verification</i>
M1 Android version live WP1, month 6	Android version is uploaded to the Android App Store after operational testing. This sets into motion a number of parallel processes previously done only for iOS: A/B testing, in-app advertising, etc. iOS vs will lead.
M2 Canterbury launch WP2, month 10	Target: 4% sign-up rate. If we hit 2%, we will move on to our other EU university cities; otherwise we will collect student feedback as to why the product and/or campaign was unsuccessful; then proceed to EU.
M3 Brighton launch WP2, month 12	Target: 7% sign-up rate. If we hit 3.5%, we advance to other sector cities; if not, we will conduct a limited poll to understand why not before EU.
M4 Customer service dedicated person WP4, month 15	This is a branching point: if inquiries exceed 50/week, hire dedicated customer relations assistant, else maintain message system of queries and responses.
M5 Rental pay escrow WP4, month 15	PayPal removes the 4-month probationary phase after successful trial run and this app feature is automatically engaged from prior deposit.
M6 Local ignition of national uptake WP2, month 15	If focused market penetration succeeds in a six cities, we anticipate a boost in national uptake. To ignite the sparks, we will employ our national PR campaign with the help of subcontractor Bell Pottinger.
M7 EU replication WP3, month 21	Focus on national uptake in Ireland, Germany, France and Belgium. Accelerate foreign banking, recruitment of fluent marketers.

## 3.2.c Innovation management

### *Management*

Thomas Fink and Ben Lynch have had significant experience in managing a team of developers and performers for achieving complex goals in uncertain conditions; some of these are listed in section 4. Fink has led multi-million academic and commercial projects, and Lynch in has had experience both founding companies of his own (Minuco and Noat) and running complex development projects with a number of intermediaries; again see section 4.1.c and 4.1.d. We believe that this experience will enable us to successfully implement this Phase 2 proposal.

### *Verified learning*

To confirm our value hypothesis—that Qoob is of genuine value to citizens who have high mobility needs—we constantly need to assess the correspondence between the product we offer, and the product that users find valuable. We strongly believe in so-called verified learning, in which each added feature or design change is tested in the field to check if its hypothesized value actually materializes. We will conduct frequent A/B tests, in which we simultaneously compare our product in the same region across a single independent variable (such as the price of an auto-generated tenancy agreement, or the ability to filter by common interests). Although commonplace in major websites such as Facebook and Spotify, it is less standard for apps, because, for example, the App Store does not allow multiple versions for download. One way to bypass this is to randomize whether or not a user has feature A or feature B by using the timestamp of his original download modulo.

### *Simplicity*

Simplicity and ease of use is one of our driving values. We seek to reduce complexity whilst maintaining functionality by comprehensively understanding user tendencies and identifying repeatable modules. A well designed technology interface emphasizes user experience (UX) by understanding user psychology to create a low barrier to entry. In a collaborative setting, UX relies on a set of web, app and database technologies for providing fluid, agile user interactions with digital environments and anticipating likely failure modes so that the system remains robust whilst minimizing constraints on the user. Adding, browsing and transacting property on a mobile device places extreme demands on form and function. Our relentless pursuit of simplicity helped us achieve a minimal number of gestures and few prompts for navigating our product. As we introduce new features, we will collect data from usability tests to maintain and improve simplicity.

## 3.2.d Risks

- *Technical risks* relate to unexpected difficulties in implementing our technology.
- *Commercial risks* relate to unexpected events in how users derive value and we generate growth.

<i>Technical risks</i>	<i>Mitigations</i>
R1 Property transacting is too complex to be done from a smartphone.	We have made great strides in reducing browsing and transacting complexity. We will do further user testing cycles of build-measure-learn to identify and remove complexity and add clarity.
R2 Not all European domestic addresses are indexed.	This will depend on uptake trends. If the problem persists, we will allow users in remote areas to manually pin their location on a map; this may need to be moderated case by case.
R3 Rapid increase of users reduces performance.	Use Amazon Elastic Cloud (EC2).
R4 Downtime or attack (e.g., denial of service; loss of customer information).	Implement distributed architecture, smart load balancing, which comes with services like AWS or EC2 using multiple instances over multiple geographic nodes.
R5 Support for different sized phones/tablets.	Use adaptive design which will fit for both tablets and phones.

R6	“Feature creep” slows verification and development.	We will cover new functionality by unit tests and new user experience by automated UI tests. Additionally we will identify and deactivate outmoded or unpopular function through A/B testing.
	<i>Commercial risks</i>	<i>Mitigations</i>
R7	Lack of relevant content: no, or not enough, properties match typical user searched.	We will focus on more manageable marketplaces: integrated community towns with high turnover, and niche market sectors like the hospitality industry communities. If we need to drill down further, we will seek whole business relocations and university housing offices to sign up ‘content partners’ en masse to gain critical mass.
R8	Replication by a competitor: a competitor sees what we are doing and copies our concept.	This is mitigated by a combination of continual development and innovation management. We will introduce new features one at a time: at first enough to hit critical mass, and then a steady stream of sticky improvements. Users tend to be loyal if the core service is maintained and there is a clear trajectory of periodic innovation.
R9	Stale property content.	This means that an owner lists property but rents it off-platform or loses interest and does not update his listing. In property searches we will rank results, all else being equal, by the most recent edit date.
R9	Growth but little revenue.	LIMS Ventures incubated our most recent product and owns 20% of Qoob Ltd shares. In exchange they will provide, gratis, serviced office space for a barebones team in central London (though we hope to augment this through additional rent). If cash short, we will reward additional hires beyond the main team with shares in lieu of salaries.
R10	Revenue but little growth.	We will shift our engine of growth: from a primarily viral engine (users generate new users) to a PR/advertising engine.
R11	Core team resilience.	We know from prior business developments the risk to efficient operations from team defection. Our core team of four has sufficient redundancy in key skills to be resilient to the loss of any one person.

## 3.3 Consortium as a whole

### 3.3.a Technical and commercial experience

Our consortium has a single SME partner, Qoob Limited, with a core team of four members (Fink, Rybiansky, Lynch and Dorrington) and two planned third party subcontractors (Synergy, Pottinger).

<i>Technical experience</i>		
Thomas Fink	Core team	Models of innovation, collab. platforms, app design, stat. physics
Roman Rybiansky	Core team	Design, marketing, viral architecture
Ben Lynch	Core team	Software innovation, large database management
Simon Dorrington	Core team	Property acquisition and disposal, database curation
Synergy	Subcontractor	Web and app development (iOS, Android)
Bell Pottinger	Subcontractor	Print media PR, network of journalism and online contacts
<i>Management/commercial experience</i>		
Thomas Fink	Core team	Managing large project grants
Roman Rybiansky	Core team	Managing developers, user psychology and user needs
Ben Lynch	Core team	Software commercialization, platform licensing, intl marketing
Simon Dorrington	Core team	Property management, property investment
Synergy	Subcontractor	Resilient platforms, agile development, responsive
Bell Pottinger	Subcontractor	International brand management, leading global PR campaigns

### 3.3.b Subcontracting and partner

We plan to subcontract two third parties, Synergy (programming) and Bell Pottinger (global PR). Total subcontracting costs are 5.8% of the total budget. We will consider a partnership with Rocket Lawyer.

#### *Synergy*

What are they?	Synergy is a software, web and mobile solutions provider. We will work directly with the founder, Ruslan Musagitov.
What will they do?	Synergy will help implement and program our platform and interface revisions for the iOS and Android implementations. Total person-months required: 24.
Why did we choose them?	Being small, Synergy is fast and agile; we have honed our build-measure-learn cycle down to 72 hours when needed. They have good design skills and communicate well. We have worked with Synergy for 17 months to create the back end platform and the nine internal, and four public, versions of our app so far.
Is it best value for money?	We tested two UK, one Hungarian and one South African firms. At \$33/hour, we have not found a competitor offering such strong design and development at such competitive prices.
Relevant WPs and tasks	Tasks 1.1, 1.3, 1.4, 1.7 and part of tasks 3.5

#### *Bell Pottinger, UK*

What are they?	Bell Pottinger a leading London PR firms and has a global presence. We would work with Hugh Taggart and Emma Ballantine Dykes.
What will they do?	With their global reach, Bell Pottinger will help us strengthen our presence in the UK and replicate our market in other countries.
Why did we choose them?	We've worked with Bell Pottinger for a year and they have shown they can deliver, e.g., they orchestrated the <i>Daily Mail</i> article about us (section 1.1.b). As well as handling our PR, they helped us define our product so as to best capture public interest.
Is it best value for money?	We have approached other PR firms with international experience, and none provided comparative value for money, nor matched Bell Pottinger's enthusiasm for our concept and its global potential.
Relevant WPs and tasks	Tasks 4.5 and 5.4

#### *Rocket Lawyer, U.S.*

What are they?	Rocket Lawyer is a legal technology company that provides online legal services to SMEs by commoditizing routine legal packages.
How could we partner?	Our app Qoob needs auto-generated legal contracts, customized to the relevant territory. Rocket Lawyer provides auto-generated legal modules, including customized contracts.
What's the next step?	The UK head of Rocket Lawyer visited Qoob Ltd's London office to discuss partnering. Our next step is a revenue-sharing arrangement for in-app generated tenancy agreements.
Relevant WPs and tasks	Task 4.7 and part of task 4.1

## 3.4 Resources to be committed

### 3.4.a Summary of personnel

We envisage a total of 180 person-months over the 24-month period of Phase 2. Total subcontracting costs are 5.8% of the total budget.

<i>Personnel</i>	<i>Person-months</i>	<i>Subcontracting</i>	<i>Person-months</i>
Core team: Fink, Lynch, Rybiansky, Dorrington	42	Synergy	24
Operations manager	12	Bell Pottinger	6
App developer	24	<i>Total</i>	30
Marketing	24		
Sales	18	[Subcontracts described in section 4.2]	
4 × SURFs (student projects via LIMS)	12		
Native German for German market replication	6		
Native French for French market replication	6		
Customer research and customer service	6		
<i>Total</i>	150		

The 150 person-months (not including subcontracting) break down into the respective work packages as follows:

<i>Participant</i>	<i>WP1</i>	<i>WP2</i>	<i>WP3</i>	<i>WP4</i>	<i>WP5</i>	<i>Total</i>
1 Qoob	30	27	33	39	21	150

### 3.4.b Other direct costs

*Please complete a table if the sum of the costs for 'travel', 'equipment', and 'goods and services' exceeds 15% of the personnel costs for that participant.*

Our total Other Direct Costs does not exceed 15% of the personnel costs for the single participant.

## Colophon

This proposal was written collaboratively with Google Docs by the core team members. Figures were made with Mathematica GeoGraphics and Adobe Illustrator, using data from Eurostat, Wolfram CountryData and CityData, and our internal user statistics.

## 4 Members of the consortium (not part of page limit)

### 4.1 Participant: Qoob Limited

#### 4.1.a Description of the legal entity

Qoob Limited, founded in 2014, makes innovative software for collaboration, collective innovation and disintermediation. Its central London headquarters is its base for a diverse team of five whose skills span software engineering, property management, technology management, design, statistical physics, advertising and the mathematics of simplicity. Between them the team has developed several technology platforms and mobile apps, including for a time the number one most popular free app for the iPhone.

#### 4.1.b Key persons

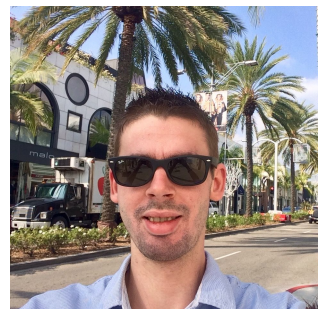
Dr Thomas Fink (male) studied physics at Caltech, winning the Fisher Prize for top physicist, and did a PhD at the Cavendish Laboratory, Cambridge with Robin Ball. He was a Junior Fellow at Caius College, Cambridge, and a postdoc at Ecole Normale Supérieure with Bernard Derrida. He is currently a Charge de Recherche in physics in the French CNRS and the Fellow of the London Institute for Mathematical Sciences. Fink has written popular science books with sales of 1/3 million, out of which he was responsible for the number free iOS on the App Store. His research interests include discrete dynamics, creativity, statistical mechanics, graph theory, evolvability, disintermediation and innovation.



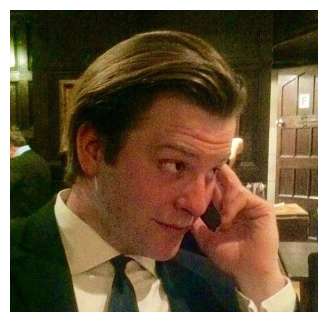
Ben Lynch (male) has worked for many years as a software innovation consultant and company founder—delivering innovative alternatives as well as simple practical design solutions for a range of organisations from Fortune 500 and government to new start-ups. Ben was educated at Imperial College London and the University of Paris XI. His early career was in sales, marketing and advertising. He then set up a R&D company working on unique patterns recognition and analogue data processing systems, winning a UK Department of Trade and Industry SMART award for this work. He moved into software development and design and has been managing software development companies for over fifteen years.



Roman Rybiansky (male) has worked on mobile app marketing and app commercialization, and been involved as a design consultant for iOS optimization. Rybiansky has worked for Qoob last year and is developing our product stability, verified learning and innovation management and social media strategy. He has worked with our subcontractor Synergy. Rybiansky is interesting collaborant.



Simon Dorrington (male) specializes in property investment, including property acquisition and disposal (Ostroumoff Ltd), sourcing vanilla real estate, and asset management (Oak IMG). His focus has been the London, UK and German property markets. Dorrington also has experience in property database management, which dovetails well with our platform back end, and sourcing privately rental and sales.



### 4.1.c Up to five relevant products or services

Fink, Lynch, Rybiansky and Dorrington have led, jointly or individually, the following:

*Complex search.* UK DTi's original taxonomical information management system - designed and implemented the original software for the UK department of trade and industry to implement a system to managed all its internal documentation using taxonomical structures adding metadata to their document structure to facilitate and streamline searching on core document attributes and content.

*Data dating.* Adtones, a new start-up launching in Denmark Q2 2016 delivering mobile advertising in place of the user's call connection tone. Matching personal profiles to campaign profiles.

*Machine to machine provisioning.* Third party integration - Cable & Wireless (now part of Vodafone) broadband and mobile provisioning platform - developed a provisioning platform so that cable and wireless partners could automatically provision a range of services without the need of any manual intervention - allowing cable and wireless to compete with BTs with a far smaller service offering.

*Changing practices.* UK Government House of Lords management systems - designed and developed the system that runs the day to day debate management in the British House of Lords, allowing members to book and manage their planned speeches modernising ancient systems and protocols.

*Man's Book iOS app.* For a period the number 1 most popular free app on the App Store. We extended the gaming app to a pay version which was released a month later.

### 4.1.d Up to five relevant projects or activities

*Adaptive networks.* Led a \$1.05m research project funded by the U.S. Department of Defense for designing networks capable of self-healing and adapting, which involved managing a team of 5-8.

*Dynamics of rapid technological innovation.* Led a \$200,000 research and development research project funded by the Boston Consulting Group to develop a theoretical foundation for what drives innovation in companies.

*Enron real time gas well monitoring system.* Designed software to provide Enron with real time reporting on gas "well head" production gathering data directly from flow monitors and converting this into real time reports for energy traders.

*Collective creativity.* Designed two Android apps for anonymous collaboration and emergent creativity and advanced problem solving. One was for illustrating visual designs in which each participant can online edit mosaic tiles (effective pixels), the other in which users take turns (anonymously and online) rearranging sets of letters to collectively engage in creative writing (such as Haiku, sonnets, very short prose).

DARPA FunBio. A research grant from the Defense Advanced Research Projects Agency to understanding the dynamics of evolvability.

## 4.1 Third parties involved in the project

Does the participant plan to subcontract certain tasks? Yes

Does the participant envisage that part of its work is performed by linked third parties? No

Does the participant envisage the use of contributions in kind provided by third parties? No



## 4.1.a Synergy

Subcontracting amount: €62,740

Tasks 1.1, 1.3, 1.4, 1.7 and part of tasks 3.5

Synergy is a software services and solutions provider. The company started building iPhone applications for clients from England, Canada and the United States. Since then they've expanded their expertise to Android platform technology. Their developers have accumulated great experience in delivering high-quality custom software products.

Qoob has worked with the founder of Synergy, Ruslan Musagitov, and his team over the 15 months to create the nine internal, and three live, versions of our iOS app and the back end platform. Synergy provides significant value for money: coming in at \$33/hour, we have not found a European or other competitor which offers such strong design and development at such competitive prices. We communicate via Skype with Musagitov two to three times a week. We envisage one full time developers over the course of the 24 months of our project.

## 4.1.b Bell Pottinger

Subcontracting amount: €37,260

Tasks 4.5 and 5.4

Bell Pottinger is one of the leading London PR firms, and we have worked with them during the last year in the runup to the release of our iOS app. They orchestrated the news story written about us and our product in the Daily Mail (included in parts 1-3), the world's second most-read newspaper in the English language, with 225 million distinct readers per month. We have worked in particular with Hugh Taggart and Emma Ballantine Dykes, who played a role not only the our PR but in helping us to define our product so as to best capture the public imagination and interest. Bell Pottinger have a global reach, and will be invaluable to helping us strengthen our presence in the UK and replicate our market in other countries. We have approached other PR firms with national and international experience, and none provided comparative value for money, nor matched Bell Pottinger's enthusiasm for our concept and its global potential. We envisage subcontracting them for 9 months at 50% effort, starting from month 6, at a cost of €4140/month.

# 5 Ethics and security

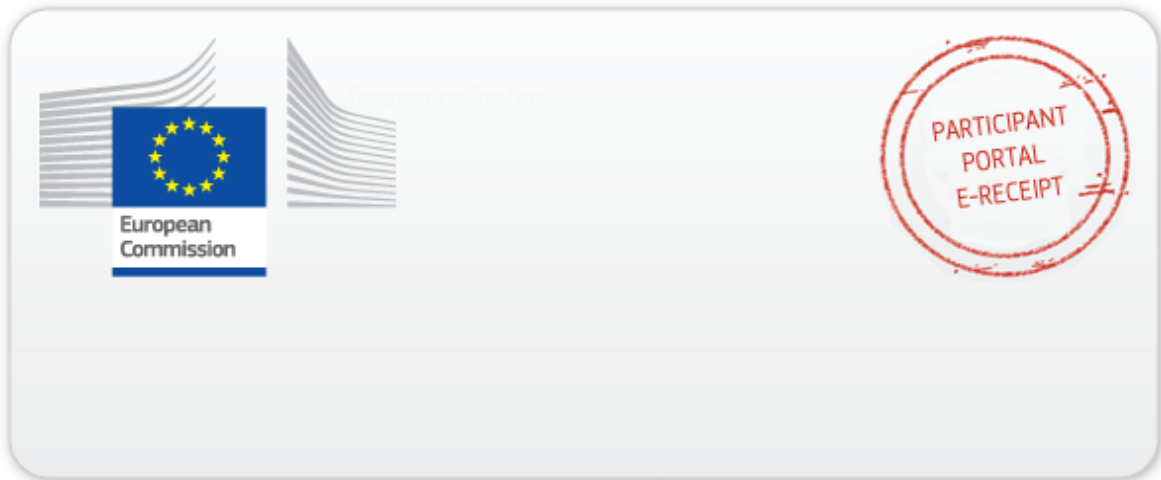
## 5.1 Ethics

There are no ethics issues involved.

## 5.2 Security

Please indicate if your project will involve:

1. Activities or results raising security issues      No
2. 'EU-classified information' as background or results      No



This electronic receipt is a digitally signed version of the document submitted by your organisation. Both the content of the document and a set of metadata have been digitally sealed.

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