

## REAL ESTATE APPLICATIONS FOR SMARTPHONES A MARKET OVERVIEW FOR AUSTRIA AND GERMANY

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### ABSTRACT

*Our research focuses on the appliance of real estate applications (RE-Apps). These productive small programmes on smartphones and tablets will be classified by their usage and analysed concerning their functionality. A sub-classification is made for the ability of Augmented Reality (AR) functions.*

*Market analyses assume a rapid growth of the number of smartphone applications within the next years. The number of downloaded apps in Apples 'App Store' reaches the amount of 25 Billion downloads in February 2012. As we pointed out in our paper 'Looking for property via smartphone' at the ERES conference 2011 the usage for real estate applications will sharply increase. This trend is supported by the growing numbers of AR applications presented at the PRRES conference 2012. AR means that a value for the user is created by enhancing the real picture through the smartphone camera by additional information turning real and virtual objects in a multi-dimensional relationship to each other.*

*There are several RE-Apps concerning RE-search, architecture, buildings, real estate administration, refurbishment and housing renewal and even orientating in shopping centers. The field of applications for real estate is wide, but not explored. The paper analyses the usage of RE-Apps with special focus on Austria and Germany. The work is based on extensive literature research providing a methodical comparison of applications available. Based on the results of our research, the project covers the structural, technological and user related factors that facilitate or impede dissemination of RE-Apps. As a result it should be given a smart overview of the existing applications and the market potential of RE-Apps for real estate with a visionary conclusion of expected future developments especially in the field of AR*

Keywords: app, application, augmented reality, smartphone, real estate search, indoor mapping, living architecture, new technology, new media, mobile software, mobile business

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### INTRODUCTION

In January 2011 only eleven billion Applications (Apps) have been downloaded via Apple's 'App Store'. In March 2012 twenty five billion apps have been downloaded. So one year later the download figures raised up by more than 125%. These figures show that apps have a big market growth and a high market potential. The main characteristics of an app are its simple usage and the flat training curve in usage in a short life cycle. It is a cheap product, created for consumers and distributed via virtual markets. [LangSittler 2012a] The two biggest virtual markets are Google's 'Google Play' and Apple's 'App Store'. Therefore the two leading operating systems (OS) on smartphones are Google's Android and Apple's iOS. The following figure shows the worldwide market share from 2007 to 2011 of operating systems in percent. [Gartner 2011]

#### Worldwide market share of operating systems in percent

Operating System (OS)	Market Share in %				
	2007	2008	2009	2010	2011
Android	0.0	0.0	3.9	22.7	38.5
iOS	2.7	8.2	14.4	15.7	19.4
Symbian	63.5	52.4	46.9	37.6	19.2
Research in Motion	9.6	16.6	19.9	16.0	13.4
Microsoft (Windows Mobile)	12.0	11.8	8.7	4.2	5.6
Other OS	12.1	11.0	6.2	3.8	3.9
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

[Gartner 2009-2011]

Symbian which is the OS of Nokia was the market leader from 2007 to 2010. In 2011 Android (which is used for example on Samsung and HTC smartphones) became the worlds most used operating system with more than 38%. Apples iOS was on the second position with about 19%. Symbian lost his leading market position and has a market share of nearly 19%. [Gartner 2011]

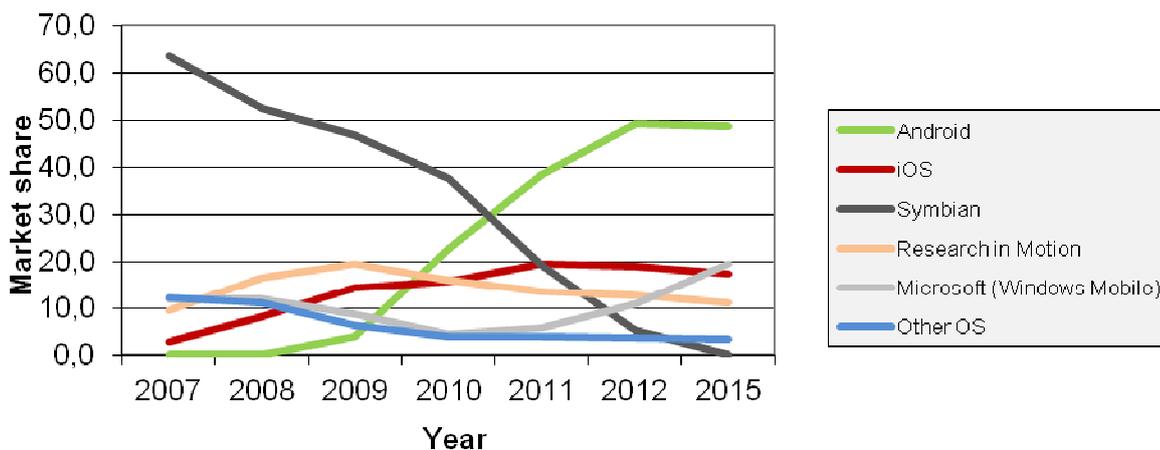
**Forecast worldwide market share of operating systems in percent**

Operating System (OS)	Market Share in %	
	2012	2015
Android	49.2	48.8
iOS	18.8	17.2
Symbian	5.2	0.1
Research in Motion	12.6	11.1
Microsoft (Windows Mobile)	10.8	19.5
Other OS	3.4	3.3
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

[Gartner 2011]

The development of OS till 2015 show some changes. As Nokia and Microsoft built a strategic alliance, Gartner predict Windows Mobile in 2015 on the second place. Android will be market leader with a share of nearly 49% of the whole OS market. Apple will be ranked at the third position with about 17%. The future trend can be seen in the following figure.

**Timeline of worldwide market shares of operating systems**



[Author’s illustration based on Gartner 2011]

Experts are not surprised by the fall of Symbian. Nokia’s operation system for mobile phones and smartphones is technically not advanced enough. Therefore Nokia has missed out major developments on the mobile phone market. Almost every third device sold on the mobile phone market is a smartphone with a high-quality operation system. In response to losing ground to Google, the world’s largest mobile phone manufacturer Nokia allied with the world’s biggest software company Microsoft. Both companies have announced that in future, Nokia will integrate the operation system Windows Phone 7 into its smartphones. [Statista 2011a]

As our paper concentrates on existing real estate apps (RE-Apps) on the Austrian and German market both mobile communication markets are described shortly.

### **The Austrian mobile communication market**

A1's Social Impact Study 2011 shows that Austrians are using mobile phones ever more extensively: phone calls, SMS, e-mails, instant messages, and posts in the social media are pooled into an individual communication flow with mobile phones. And the smartphone boom continues: 25% login the Internet via mobile phones already, which is an increase by 10% compared to 2010. On average, every fourth Austrian is using Apps. Among the 12 to 29 year old men there are 44% app users, regarding smartphones it is even 61%. [A1TelekomAustria 2011]

There is a trend that services are moving from personal computers to mobile phones. One clear development is that services are increasingly used with smartphones rather than with personal computers. More than one third of all those who use social media via smartphones and personal computers do it more often on the move with smartphones. In 2011 37% accessed Facebook, Twitter and Co. via smartphones whereas in 2010 it was just 8%. Instant messaging is used 36% more often via mobile phones rather than via personal computers. Last year it was just 10%. Navigational programs and route planners are used to an equal extend with both devices. E-mails are more and more used when traveling too. 22% use e-mails more often via mobile phones already. Comparatively new services such as cloud services are used by 10% of the Austrians and 75% of those use cloud primarily for privately. [A1TelekomAustria 2011]

Every fourth domestic user uses applications with smartphones. Independent from age, sex, and origin every fifth Austrian uses apps. The use within the whole population, and not just the young target audience, has increased by 18% last year to 25%. The most popular apps are games, news and social media. Local information is of particular importance as well. 65% are interested in apps with a local context ranging from request of costs and public services to navigational services. To the Austrians, mobile phones are of great significance. Three quarters (76%) carry their mobile phones with them all the time. At the same time there is a slight trend towards deliberate unavailability. Nowadays, 46% perceive being available permanently as annoying, in 2010 it was just 38%. Further, 53% chose to not take their mobile phones with them in order to be undisturbed. In 2010 this figure was at 49% and in 2007 at 33%. [A1TelekomAustria 2011]

### **The German mobile communication market**

The German smartphone market consists of cell phone manufacturers, mobile phone service providers and developers of operation systems. The diversity of the players on the market in the hardware sector for mobile phones is the result of the functionality of smartphones. Because the mobile device includes a broad range of computer functions, it can also be perceived as a small portable computer (PDA) including mobile phone features. In Germany, cell phone manufacturers generated revenue worth about 5.1 billion Euros with private demand for PDAs and smartphones in 2011. The smartphone market belongs to the most quickly emerging fields within the telecommunications sector. According to the Federal Association Information economy, Telecommunications and New Media (Bitkom) Germany, 11.5 million devices have been sold in 2011. The association forecasts a further increase in sales by 15.9 million devices for 2012. Many customers are especially attracted by additional programmes called apps which can be upgraded individually. Today 34.4% of the German smartphone owners use up to 10 commercial apps on their device. Because of the increased use of apps, Booz&Company expects an increase in revenues on the app-market. In 2014, world-wide revenues with apps are expected to reach 40.7 billion US-Dollar. [Statista 2011a]

According to a market analysis for the high-tech association Bitkom, android is currently the most widespread smartphone platform in Germany. Symbian and Windows Phone lose major market shares. 40% of all the currently used smartphones in Germany use Google's Android as operation system. The Nokia platform Symbian ranks second with 24% and Apple's iPhone operations system iOS ranks third with an increase by 1% to 22%.The platforms Windows Phone and Windows Mobile from Microsoft reach 7% market share. Currently there are 23.6 million entry-level smartphones operating in Germany. These are 8.1 million or 52% more than last year. 41% of all mobile phone owners in Germany possess a smartphone. 24% of the smartphone users in Germany prefer a Samsung device. Apple's iPhone ranks second with 22.4% and Nokia smartphones rank third with 21.6%. The basis for this data is an analysis which was conducted by the market research company Comscore. They focussed on the number of smartphones in the first quarter of 2012 compared to 2011. First results of the analysis have been published in advance in an article of Focus, at the beginning of this month. [bitkom 2012]

**Comparison of the Austrian and German mobile communication market**

The most common OS in Austria and Germany is Google’s Android. In Austria Apple’s iOS is ranked on second place and Symbian on third Place. In Germany Symbian is located on second place and iOS on third place. The most popular device manufacturer in Austria and Germany are Nokia and Samsung. The iPhone is on the fourth place in both countries. The Austrians and Germans use their smartphones mostly for phone calls. After that SMS is the most used function. Furthermore Austrians use their smartphone for photographs and the alarm clock. Germans use their smartphone for mobile surfing and for managing appointments. Unfortunately there were no detailed figures available.

**Comparison of the Austrian an German mobile communication market**

		
<b>Operating Systems<sup>1</sup></b> (market shares)	1. Android (38%) 2. iOS (30%) Symbian (13%)	1. Android (40%) 2. Symbian (24%) 3. iOS (22%)
<b>Market share device manufacturer</b> (2011)	1. Nokia (42%) 2. Samsung (20%) 3. Sony Ericsson (13%) 4. iPhone ( 9%)	1. Nokia ( 34%) 2. Samsung (16%) 3. Motorola (8 %) 4. iPhone (6%)
<b>Most popular usage of Smartphones<sup>2</sup></b> (after phone calls)	1. SMS (95%) 2. Photography (81%) 3. Alarm Clock (81%) 4. Manage appointments (63%) <sup>3</sup>	1. SMS 2. Mobile Surfing 3. Manage appointments 4. Answering Mails
<b>Number of Apps used</b> Austria: per month Germany: per week	80% use 6 Apps 34% use more than 20 Apps	39,5 % use 5 to 10 Apps 9,3 % use 10 to 20 Apps <sup>4</sup>

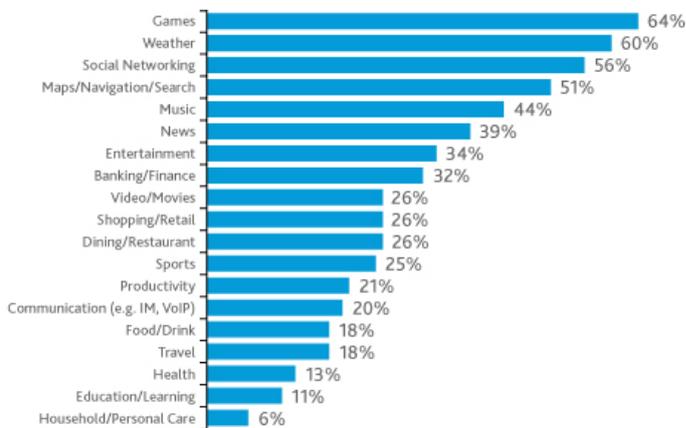
[Author’s illustration based on A1TelekomAustria 2011, bitkom 2012, Gartner 2011, MobileMarketingAssociation 2011, Statista 2011]

The real estate sector has already adopted the development of apps. Several real estate applications have been established. While there is only few literature concerning the field of real estate apps the mentioned applications are the result of an extensive internet and literature research.

Nielsen suggests a classification of mobile apps and comes to the conclusion that games are the most popular category. The field of real estate covers several categories e.g. Maps/Navigation/Search, Entertainment, Finance, Shopping/Retail, Education/Learning and Household/Personal Care.

**Popular mobile app categories**

Category of Apps Used in the Past 30 Days  
 Past 30-Day App Downloaders (Q2 2011)



[Nielsen 2011]

Based on our comprehensive research an our published papers we suggest the following classification of real estate applications.

## Classification of the real estate apps



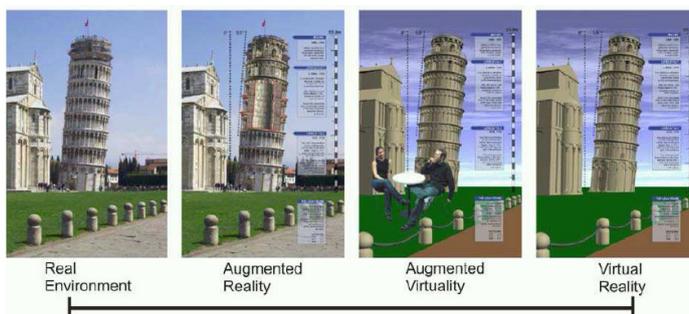
[based on Lang Sittler 2012a]

The classification of smartphone applications are corresponding to AR applications. The AR applications (which are marked red in the figure above) are a subset of real estate apps. As a field of research we collected a wide range of real estate apps (with and without AR) for smartphones. These applications are mostly national for the Austrian mobile market. Some of them are international and some only partly feature AR in the field of real estate search and architecture/interior design. [LangSittler 2012] In the literature the field of RE search is often mentioned [ClareityConsulting 2010]. We discussed this topic last year at the ERES conference. [LangSittler 2011]

Augmented reality is able to extend the real-life image of the smartphone camera with additional information through GPS and compass information as well as with data from real estate search engines or data of additional databases and external information. This creates additional benefits for the user. At the same time, reality and virtual objects correlate in a three dimensional way.[LangSittler 2012a]

As it can be seen in the figure below AR is based on the real world, with a limited set of virtual objects mixed in. Within augmented virtuality a virtual environment with some real aspects is shown. While AR shows the real world, AV shows a virtual reality based on a computer-generated world. The boundary between AR and AV is not strictly defined.

## Milgram continuum of reality and virtuality



[Siegler Wietzel 2009]

The mentioned applications that feature AR are especially marked with the AR banner.



Our applications are given in the following figure.

Market Overview: Real Estate Apps <sup>1)</sup>

								
Wohnnet.at	immodirekt.at	Tupalo	Layar Wikitude	iEigentum/xEigentum	IMMOMapping	Wohnungsübergabeprotokoll Pro	Mein Umzug	Energie Cockpit
DVID Direktmarketing und Internet-Dienstleistungs GmbH	AGRE Handels- und Werbe-GmbH	Tupalo.com	Layar B.V. Wikitude GmbH	Software Beinhofer	WEBSERVICESUnited	Haufe-Juwere GmbH & Co. KG	Immobilien Scout GmbH	enexoma AG
Real estate search	Real estate search	Information on surrounding area	Information on surrounding area	Land register	Land register	Tools for flats/ Real estate administration	Tools for flats/ Real estate administration	Tools for flats/ Real estate administration
Real Estate Search App with approx. 40.000 available objects. No AR-functionality is offered. Features as detailed view (all important information of the object), plot-view (where is the object located), watch-list, insertion and push-up notifications.	Real Estate Search App with approx. 50.000 available objects. No AR-functionality is offered. Very fast app. Search options with classic key-input. Features as login, watch-list, bookmarks with personal criteria, search-profile and push-up notifications.	App like the same-named platform for exploring the neighbourhood of the desired object. Hotspots, pubs, premises around the location are shown.	Augmented Reality browser for live views of the surrounding information of the desired object. Hotspots, pubs, premises around the location are shown in the live view of the camera of the smartphone.	This app is used for identifying the owner of a plot of land via iPhone and the current GPS position. So daily updated information could be achieved.	Functions of the land register via GPS information including active, transaction-oriented through purchase contracts of the surrounding area, search of deeds, zoning plans (for Vienna). [Unfortunately not yet available in iTunes]	App for landlords, property managers and real estate agents to document and archive a handover of an apartment (to a new tenant or getting back the flat digitally). The Pro version can administrate several people and additional counters. The final document can be sent via email.	With this app the personal relocation can be organized. Features as task lists, scheduling, checklist, company search and calculator for your necessary number of moving boxes.	The app Energy-Cockpit controls your personal energy consumption. You need to have a digital power meter.
iOS	iOS, Android	iOS, Android	iOS, Android, Symbian, BlackBerry, (Windows Phone 7)	iOS, Android	iOS	iOS	iOS	iOS
free	free	free	free	free <sup>2)</sup>	free <sup>2)</sup>	3,99 EUR	free	free
<a href="http://www.wohnnet.at">www.wohnnet.at</a>	<a href="http://www.immodirekt.at">www.immodirekt.at</a>	<a href="http://www.tupalo.com">www.tupalo.com</a>	<a href="http://www.layar.com">www.layar.com</a> <a href="http://www.wikitude.com">www.wikitude.com</a>	<a href="http://www.beinhofer.com">www.beinhofer.com</a>	<a href="http://www.webservicesunited.com">www.webservicesunited.com</a>	<a href="http://www.haufe.de">www.haufe.de</a>	<a href="http://www.immobilien-scout24.de/umzug">www.immobilien-scout24.de/umzug</a>	<a href="http://www.enexoma.de">www.enexoma.de</a>
								
Online-HV	RIS	Rustler	Gesiba	Flowfact Headliner	CommBank 3D Reader	Jump & Bou	Real Estate Tycoon	Messepark Dornbirn
Real Estate Management Software Development GmbH	RIGHTInnovation - BY WASS GmbH	Rustler-Gruppe GmbH	Gesiba Gemeinnützige Seelings- und Bau AG	Flowfact AG	Commonwealth Bank of Australia	Raiffeisen Bausparen	SolverLabs LLC	Einkaufszentrum Messepark-Venuhilfsgesellschaft mbH.
Tools for flats/ Real estate administration	Information on real estate	Information on real estate	Information on real estate	Infotainment	Infotainment	Infotainment	Infotainment	Shopping center
This app shows the current status of properties accounting with additional functionalities as object data, contracts, correspondence and photo documentation. Features as search, favourites and push-up notifications for new amending laws.	This brand new app brings the Auction law-information-system on smartphones. All laws of the Federal states on the public are shown in the consolidated version and photo documentation. Features as search, favourites and push-up notifications for new amending laws.	This app is one of the largest property managing companies shows several regulations for rent in Austria.	This app shows the current residential building program of the company Gesiba.	Fun app. Through shaking the smartphone witty sayings can be generated.	With this app (and the concerning market) the real estate market in the virtual city Chernford Hill can be visited. Terms as transactions and purchase prices are shown. This fun app is used for explaining AR.	A combination of a pump & run-game with useful applications like a mortgage calculator, energy saving calculator, mechanics level and interior assistant from one of the largest Austrian building society.	The app offers an entertaining game concerning real estate agents. You have to buy and sell houses in the volatile property market as fast as possible to earn enough money for the 10 Million Pound mansion.	The app represents the shopping mall Messepark Dornbirn in Austria. All shops are listed with detailed information. Additional functions as shopping list, car finder and administration of gift and shopping cards.
iOS	iOS	iOS	iOS, Android	iOS	iOS	iOS, Android	iOS	iOS, Android
free	free	free	free	free	free	free	0,79 EUR	free
<a href="http://www.online-hv.at">www.online-hv.at</a>	<a href="http://www.ris.bka.gv.at/UJ/RISApp.aspx">http://www.ris.bka.gv.at/UJ/RISApp.aspx</a>	<a href="http://www.rustler.at">www.rustler.at</a>	<a href="http://www.gesiba.at">www.gesiba.at</a>	<a href="http://www.flowfact.de">www.flowfact.de</a>	<a href="http://www.commbank.com.au/oes30">www.commbank.com.au/oes30</a> <a href="http://home-baas-3d-reader.aspx">http://home-baas-3d-reader.aspx</a>	<a href="http://www.raiffeisen-bausparen.at/app">http://www.raiffeisen-bausparen.at/app</a>	<a href="http://www.solverlabs.com">www.solverlabs.com</a>	<a href="http://www.messepark.at">www.messepark.at</a>

<sup>1)</sup> This table is a personal choice of the authors and raises no claim to completeness.

<sup>2)</sup> The costs of the abstract from the land register has to be paid to the supplier.

<sup>3)</sup> Produced pdf-documents are automatically watermarked. If not, you have to pay for each plan or use a subscription model.

Market Overview: Real Estate Apps <sup>1)</sup>

							
<b>Name of the App</b>	Shoppingcity Setersberg	FastMall	Wohnraum	Pixelate	Home Interior Layout Designer	MagicPlan	SOLight
<b>Vendor</b>	Shopping Center-Management GmbH / eubero OG	asperm Die Seestadt Wiens	HI Wohnbau GmbH Meiner - ITS	Sprouti, LLC	M.O.C. Interior Designer, LLC	Sensopia Inc.	Anavics- Digi-Img, Bernd Fene Rupprecher
<b>Category</b>	Shopping center	Architecture/ Interior design	Architecture/ Interior design	Architecture/ Interior design	Architecture/ Interior design	Architecture/ Interior design	Dimensions/Plannings
<b>Description</b>	This app represents the shopping mall Shoppingcity Setersberg. All shops are listed with detailed information. Additional functions as shopping list and search.	Using the Layer AR browser the building site named 'Seestadt Asperm' can be viewed through the camera of the smartphone. With 3D-objects the future buildings are shown schematically from special viewing points onsite. The virtual city is contributed by additional texts, pictures and videos.	The app uses AR-technology to show the project 'Wohnraum' in 3D-dimentional. The app is used as an anchor to see the object from several angles.	The app allows you to paint walls virtually. Only a photo is needed to build new living worlds.	With this app you can construct and plan complete rooms, buildings and interior designs.	This app uses the sensors of a smartphone like GPS, compass and camera to make a fast, but detailed floor plan. After taking the dimensions the room will get an automatic dimensioning.	With this AR-app you can see detailed information concerning all sun paths with highest and lowest positions of the sun. To determine the solar line of an apartment you can check the light intensity with this app.
<b>Operating System</b>	iOS, Android, Symbian	iOS, Android	iOS	iOS	iOS	iOS	iOS
<b>Price</b>	free	free	2,39 EUR	1,59 EUR	2,39 EUR	free <sup>3)</sup>	2,99 EUR
<b>Hyperlink</b>	<a href="http://www.shoppingcitysetersberg.at">www.shoppingcitysetersberg.at</a>	<a href="http://www.ovos.at">www.ovos.at</a>	<a href="http://www.bi-wohnbaude.at">www.bi-wohnbaude.at</a>	<a href="http://www.sprouti-inc.com">www.sprouti-inc.com</a>	<a href="http://www.markoncall.com">www.markoncall.com</a>	<a href="http://www.sensopia.com">www.sensopia.com</a>	<a href="http://www.anavics.at">www.anavics.at</a>
							
<b>Name of the App</b>	Sonar Ruler	iHandy Wasserwaage	Lautstärkemesser VU Meter	Wörterbuch Immobilienwirtschaft	ImmoCal	BA II Plus Financial Calculator	
<b>Vendor</b>	Laan Labs	iHandy Soft Inc.	Cateater, LLC	IZ Immobilien Zeitung Verlag Acalada GmbH	Logar Software	Texas Instruments Hewlett Packard	
<b>Category</b>	Dimensions/Plannings	Dimensions/Plannings	Dimensions/Plannings	Lexicon/Languages	Tools for calculation/financial calculation	Tools for calculation/financial calculation	
<b>Description</b>	With this app distances could be measured through sound/pulses from the smartphone. A range up to 18 Meter could be measured. The results are presented in feet, yards or meters.	This app is one of some applications for mechanics level. Including a special calibration function	App for measuring sound intensity on a smartphone.	One of the most comprehensive dictionaries in the German speaking region with more than 40.000 terms. The terms can be searched and translated from one language to the other (German-English, English-German)	This app provides a real estate calculation. Features like purchase price, repayment schedule, construction finance, and budgeting.	TI Financial mathematics calculator HP Scientific calculator	
<b>Operating System</b>	iOS	iOS	iOS	iOS	iOS, Android	iOS	
<b>Price</b>	0,79 EUR	free	0,79 EUR	39,99 EUR	0,79 EUR	11,99 EUR   23,99 EUR	
<b>Hyperlink</b>	<a href="http://laan.com/ur/products/sonar-ruler">http://laan.com/ur/products/sonar-ruler</a>	<a href="http://www.ihandysoft.com/level-free.html">www.ihandysoft.com/level-free.html</a>	<a href="http://www.cateater.com/vu">www.cateater.com/vu</a>	<a href="http://www.immobilien-zeitung.de/soesterbuch">www.immobilien-zeitung.de/soesterbuch</a>	<a href="http://www.logarsoftware.de">www.logarsoftware.de</a>	<a href="http://education.ti.com">http://education.ti.com</a> <a href="http://www.hp.com">www.hp.com</a>	

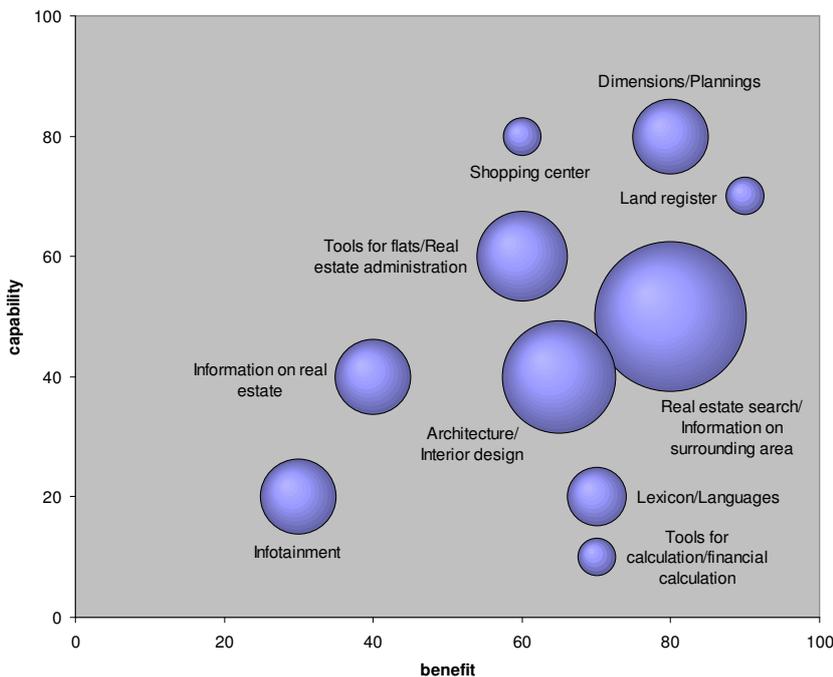
<sup>1)</sup> This table is a personal choice of the authors and raises no claim to completeness.  
<sup>3)</sup> The app is free for testing. One App-in language (one direction) costs EUR 7,99.

## CONCLUSION

As we live in a highly connected world the digital media will become more and more important and a media strategy is the key to successful business. Sales operations can be supported by several mobile applications that can simplify your life. When the application repeats the benefit your strategy is built. [Deloitte 2012] Within the mobile business the use of mobile devices is a basic criterion. Three conclusions can be made. First the business models should be adapted, secondly the architecture of mobile computing should be considered and thirdly the design of applications is in a phase of transformation. The consumer is getting in the centre of the development of mobile apps. [Kraus 2012]

The focus of RE apps today is on representing and visualization. The increasing availability of mobile apps will become more relevant. The presented applications have different relevance in terms of their capabilities in use and their benefits for the user. The size of the circles indicates the estimated market share as shown in the below author's figure.

### Proportions of real estate apps



In Austria there are several companies that use the new technology, but there are still the majority of firms that do not. One of the major players in the field of RE search immobilien.net quietly removed his AR search app from the market. The focus on AR was good for marketing, but the development and flexibility was then neglected. AR apps will have an increasing stake in the real estate industry in the marketing of properties. Austrian companies are leading here. The Viennese company Meixner IT Solutions, which has developed a system called ViewAR, which brings three-dimensional objects, such as residential buildings, live on camera of the smartphone. In Germany, the project "Wohntraum am Olypiapark" uses this model view like a real model of the project. Apart from the media marketing, the customer also has a sentimental value and an eye-opening experience. [SittlerLang 2012]

Essential to the success of an app is the added value for the user. Here it is important that enough additional information is given and the features of the smartphone, such as camera, GPS or compass are used. Unfortunately, exactly this value is not always a factor in the development of an app as large real estate firms show. Thus, the apps of the Rustler Group, one of Austrias largest agents and the property developer Gesiba rather sparse in dealing with new or important information. However, these are the first companies in the market and thus have a "first mover" advantage. The majority of real estate apps are free or low priced. There are often hidden costs that arise, for example, land registry apps. Here the download is free, but there are costs of the deed of settlement as well as access to the clearinghouse. As a new business model the media industry offers apps for real estate literature. [SittlerLang 2012]

We think that it is not a question of "why" but of "why not" having an app. Without a website a real estate company, a broker, a manager or a developer is no longer competitive. This trend will prevail also in field of real estate apps. Who has no app will earn negative points from the customer. The trend is towards software solutions on a smartphone and will increasingly continue for real estate companies. [SittlerLang 2012]

## **ENDNOTES**

- <sup>1</sup> Unfortunately there is no data concerning OS for 2012 for the Austrian market available yet. So the comparison is based on the data from Social Impact Studie 2011. ComScore published concerning market share of operating systems for the German market in May 2012.
- <sup>2</sup> The ranking of the usage depends on the brand of the smartphone. Apple users prefer mobile surfing. Less important is mobile surfing for Blackberry RIM Users. These people use their smartphones for writing mails and dealing with their timetable. HTC-Users use their smartphone for writing SMS.
- <sup>3</sup> Mobile Marketing Association, 2011.
- <sup>4</sup> Statista, 2011.

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