



EU mHealth Market Conditions Benchmarking 2015

Which EU countries are best for doing mHealth business:
A detailed overview

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A detailed benchmarking analysis of 28 EU countries
about their market readiness for mHealth business

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1 SUMMARY

The prerequisites for mHealth companies in the 28 EU countries differ significantly.

Companies that want to roll out their mHealth service in Europe are facing diverse market conditions which impact their mHealth business models.

The EU mHealth Market Condition Benchmarking 2015 compares market conditions for mHealth based on 5 market readiness dimensions including eHealth adoption, mHealth market potential, level of digitalization, ease of starting business and regulation measured and compared by 26 criteria. In addition market conditions within the EU countries have been assessed by more than 4,400 mHealth practitioners.

The best conditions can be found in those countries which are ranked high in the fact based evaluation and where the mHealth practitioners confirm favourable market conditions.

The best countries are Denmark, Sweden, the Netherlands, the UK, and Finland, with the UK offering the best market conditions for mHealth according to 55 % of mHealth practitioners.

Sweden, Denmark and the Netherlands are the most digitalized societies, with smartphone penetration among adult population being above 70%, and more than 90% of the population being regular users of the internet. Companies that want to offer a tablet based solution will find that tablet penetration shares in the 28 EU countries ranges from 10% in Hungary to 51% in the Netherlands

Denmark, Sweden and Spain rank highest for using healthcare technology. The range between countries for how HCPs and patients are using EHRs, ePrescriptions, the internet and mHealth apps is broad. For example in Denmark and Estonia all doctors are using ePrescriptions whereas in countries like Portugal and Germany the use of ePrescription is either uncommon or prohibited. Given that the implementation process for EHR and ePrescription services in a country can take many years, businesses with mHealth solutions that integrate with these platforms should look towards those countries with already established healthcare technologies, mHealth regulations and high levels of acceptance by HCPs.

The size of the addressable markets varies significantly. Depending on the target group of an mHealth solution the mHealth market potential of an EU country varies by a factor of 100. Germany offering the highest number of doctors, nurses and patients but lower than average out of pocket spending shares, might be a good country for B2C solutions or solutions with backing from private or public health insurance companies for reimbursement. Countries like Denmark, smaller in size, but with high per capita healthcare spending might be a good country for mHealth solutions emphasising cost reductions.

Countries also differ in their openness to new businesses. The number of days needed to get all formal approvals and necessary documentation varies between 3 - 35 days. In that respect starting an mHealth company in Denmark, Ireland and Lithuania is the easiest. In Malta it is the longest.

The vast majority of countries do not have guidelines published in any way for mHealth. There are a few countries that have laws in place that prohibit certain mHealth business models like Germany

and Austria (doctors are not allowed to consult a patient remotely for the first visit), but most others have no such laws in place. Interoperability standards for EHR systems are on a different implementation status, and access rights to EHR data for third party vendors also vary between countries, Nordic countries are the most open to secondary use of EHR data.

Companies must understand the significance of the 5 market readiness dimensions and start with those countries that offer the best market conditions for mHealth business as indicated by the 5 dimensions.

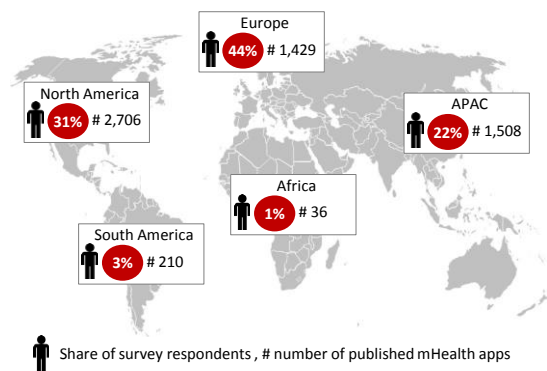
Furthermore countries should start to improve their market readiness in order to appeal to potential mHealth companies and to attract the best talents and solutions for their country.

2 SCOPE AND METHODOLOGY OF THE STUDY

The EU mHealth Market Conditions Benchmarking 2015 analyses the market conditions for mHealth in the 28 EU member states. It is part of the largest global study on mHealth app development and app publishing. The report is based on two components – the mHealth practitioners' view and a fact based country evaluation. The combination of the experience of mHealth app developers and a fact-based country performance breakdown provides unique insights into the attitude off the 28 EU member countries towards supporting and adopting mHealth.

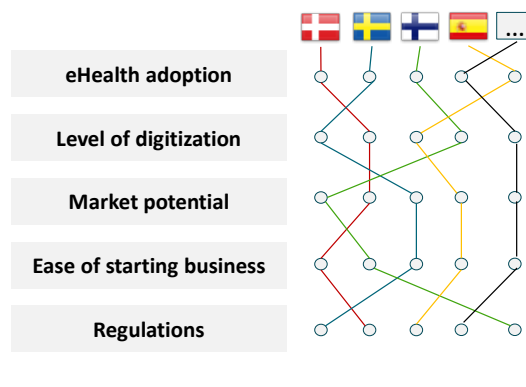
THE EU MHEALTH APP MARKET READINESS STUDY IS BASED ON THE RESULTS OF TWO RESEARCH PROGRAMS

1 MHEALTH APP PUBLISHERS MARKET ASSESSMENT



How do mHealth app publishers rate the EU mHealth market conditions ?

2 EU MHEALTH APP MARKET READINESS ASSESSMENT



This year more than 4,400 app developers, healthcare professionals and other mHealth practitioners shared their opinion on the current situation and trends in the global and European mHealth app market. The report builds on the results of the research program in terms of how mHealth publishers evaluate countries of the European Union for mHealth business. The survey participants have been asked which 3 countries are the most favourable towards, and which 3 countries are most prohibitive of mHealth. In addition they provided reasons for their selection. These results are based on their own experience in doing business as well as the experience of their colleagues and/or business partners.

4,400 mHealth practitioners have been asked to rank EU countries for their mHealth market conditions

The second pillar of the country evaluation is focused on a fact-based country assessment comparing and measuring 5 mHealth market readiness dimensions which have an impact on mHealth business. These 5 dimensions characterize the country's market potential for mHealth, and its readiness to integrate mHealth into healthcare.

eHealth adoption dimension

A set of criteria which illustrates how doctors and patients use online channels (mobile or web) to communicate, inform and ex-change information. One would expect that the more the stakeholders in a country use these channels the easier it is to explain, market and integrate a new mHealth service. The criteria of the eHealth adoption dimension are:

- GPs using electronic networks to transfer prescriptions to pharmacists (% of GPs)
- Patients making an appointment with a practitioner via a website (% of internet users)
- GPs exchanging medical patient data with other healthcare providers and professionals (% of GPs)
- Internet users seeking online information about health (% of internet users)

Level of digitalization dimension

A set of criteria that captures the penetration of capable devices within the population and their usage. The higher the penetration of smartphones and tablets and usage the better for any mHealth app business.

- Smartphone penetration (% of population)
- Tablet penetration (% of population)
- Number of used apps (average)
- Mobile internet usage (% of population)
- Regular internet users (% of population)

mHealth market potential dimension

The market potential for mHealth apps is linked to the number of potential users/patients/hospitals and the level of the healthcare spending in the country.

- Population (total)
- Number of doctors, nurses, hospitals (total)
- Number of hospitals (total)
- Health expenditure out of pocket (% of total)
- Health expenditure (% of GDP)
- Health expenditure (per capita)

Regulatory dimension

Regulation in a country can support mHealth business in providing clear guidelines of what is allowed and what is not allowed, which can reduce uncertainty. Countries differ in how they support electronic health records (EHRs) and ePrescription which is not relevant for all mHealth business models but having an open EHR and ePrescription service available in a country increases the options for mHealth companies significantly.

- Acceptance of ePrescription
- Implementation of EHR
- Standards on EHR interoperability
- Permission for secondary uses of data from EHR
- Permission of remote treatment
- Existence of e/mHealth guidelines
- Acceptance of health data transfer
- Restrictions on mHealth data storage

Ease of starting a business dimension

Countries also differ in how complex it is to open up a new business, not only in mHealth.

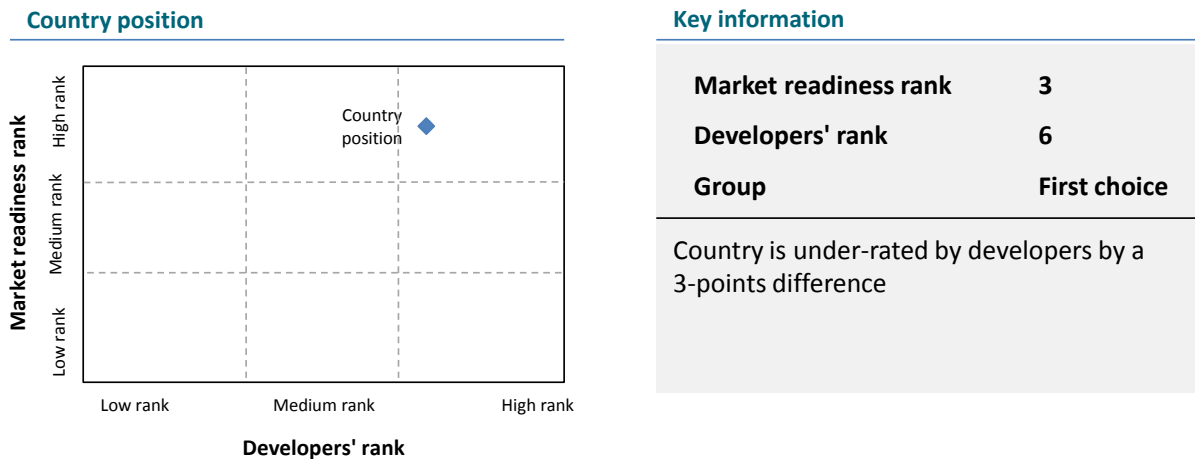
- Time needed to start business (days)
- Number of necessary procedures (total)
- Taxes (%)

The report gives valuable insights and guidelines for any company that wants to start an mHealth business within the EU as well as for government organizations in the countries that want to better leverage and stimulate the potentials of a flourishing domestic mHealth ecosystem to create jobs that require skilled labour, reduce national healthcare costs and ensure high levels of quality of care.

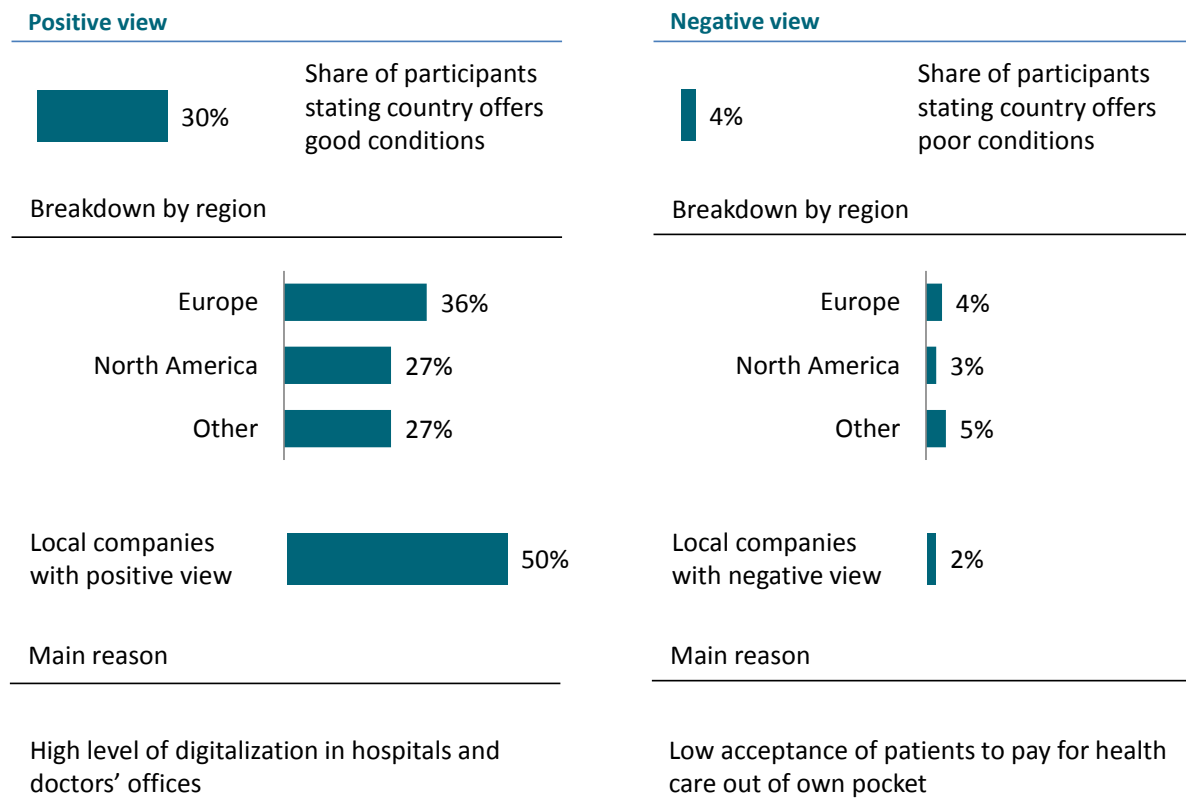
4.1 COUNTRY NAME

4.1.1 Country name- summary

Country belongs to the 'first choice' category. Country ranks high in the minds of the developers due to a perceived high level of digitalization. This is further supported by its top market readiness rank owing to its actual high level of digitalization, eHealth adoption and strong regulatory framework. Country therefore should be considered 'first choice' as a potential mHealth business location.



4.1.2 Country name- mHealth practitioners' view

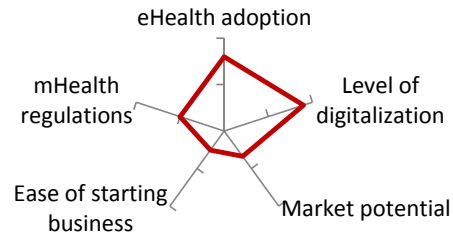


4.1.3 Country name – mHealth market readiness

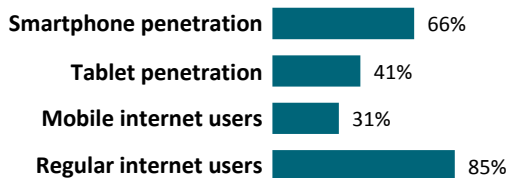
Key information

- Above average usage of technology for health by patients and doctors.
- The most digitalized society among EU countries (e.g. highest penetration of compatible devices)
- Ranked 2nd in healthcare spending per capita
- Ranked low for 'doing business' e.g. high taxes.
- Unfavorable regulatory framework for some mHealth solutions e.g. remote consultation is prohibited.

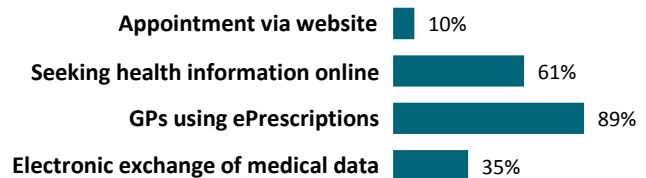
Dimension scores



Level of digitalization



eHealth adoption



Market potential

Population	7.3M	Health expenditure as % of GDP	9%
Number of doctors	35.0K	Health expenditure out of pocket	10%
Number of nurses	58.9K	Health expenditure per capita	5,900 USD
Number of hospitals	245		

Ease of starting business

Time needed to start business	22 days
Regulatory procedures	8
Taxes	52%

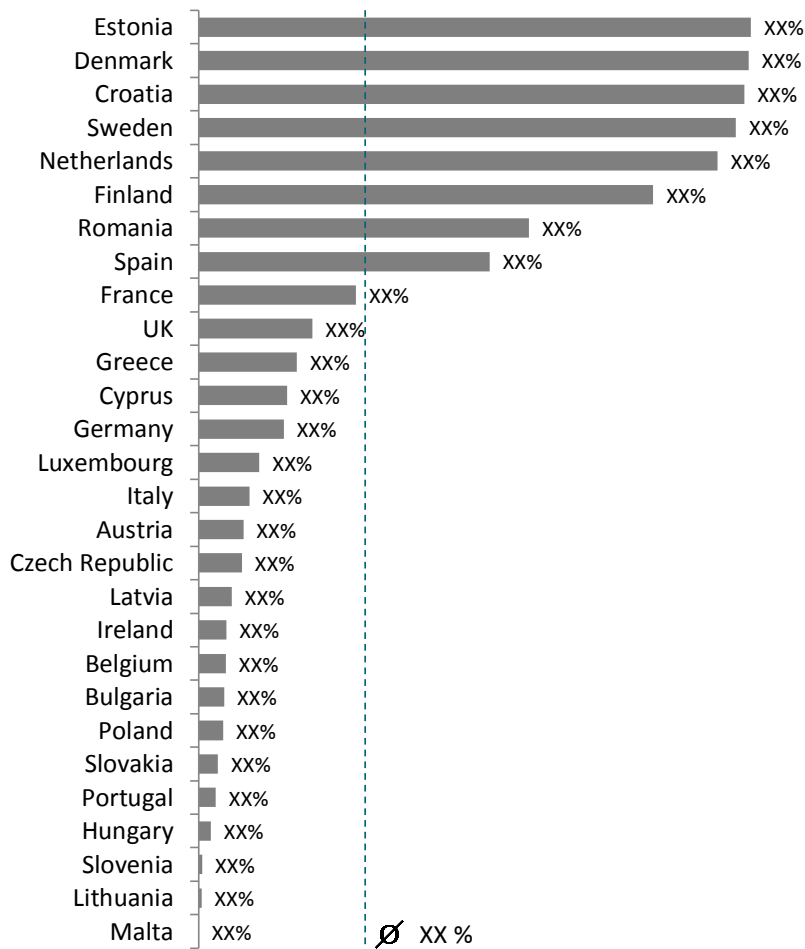
mHealth regulatory framework

- ✓ Deployment stage of shared EHR
- ✓ Existence of specific standards on EHR interoperability
- ✓ Existing ePrescription system
- ✓ Secondary EHR data usage
 - ✓ Research
 - ✓ Statistics
- ! Prohibition of telemedicine

5.3.4 GPs using ePrescription

In terms of % GPs using ePrescriptions system, there are large disparities between the EU countries. In Estonia, Denmark, Croatia, Sweden and Netherlands more than XX% of GPs make use of ePrescription services, but in countries such as Malta, Lithuania and Slovenia there is either little or no use of ePrescription.

GPs using ePrescription





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