

iLINC Policy Briefs

Regulatory Barriers In The Start-Up Ecosystem

The iLINC Survey

Conclusions &

Policy Recommendations



iLINC
ICT Law Incubators
Network

TABLE OF CONTENTS

THE ILINC THOUGHT LEADERSHIP PROGRAMME	4
I. INTRODUCTION AND OUTLINE OF THE POLICY BRIEF.	5
II. THE START-UP MARKET	5
BUSINESS DIVERSITY	5
FINANCIAL HOMOGENEITY	6
III. LEGAL CHALLENGES OF START-UPS	7
1. ENCOUNTERED LEGAL DOMAINS	7
2. PERCEIVED IMPORTANCE OF LEGAL DOMAINS	8
3. READINESS FOR FUTURE REGULATORY CHANGES	9
4. RECURRING LEGAL THEMES IN THE ENCOUNTERED LEGAL DOMAINS	10
I. Corporate Structure and Transactions	10
II. Contract and Consumer Law	10
III. Privacy and Data Protection	11
IV. Electronic Communications	11
V. E-Commerce	11
VI. Intellectual Property Rights	11
VII. Other	12
A. Health and Medical Law	12
B. Financial Law	12
C. Migration Law	12
D. Employment Law	12
E. Tax Law	12
IV. UNDERSTANDING THE REGULATORY ENVIRONMENT – LEGAL AWARENESS – GENERAL OBSERVATIONS	13
I. GENERAL UNDERSTANDING OF THE REGULATORY ENVIRONMENT	13
II. START-UPS AND LEGAL COUNSELLING	13
III. REASONS FOR NOT OBTAINING LEGAL ADVICE	14
5. POLICY RECOMMENDATIONS: INCREASE LEGAL AWARENESS AMONG START-UPS	15
V. CROSS-BORDER LEGAL BARRIERS	16
I. WHY CROSS-BORDER LEGAL BARRIERS LIMIT START-UPS' SUCCESS	16
I. CONTRACT AND CONSUMER LAW	17
II. INTERMEDIARY LIABILITY AND ONLINE PLATFORMS	17
III. VALUE ADDED TAX	17
IV. PRIVACY AND DATA PROTECTION	18
V. TERRITORIALITY OF COPYRIGHT	18
VI. CROWDFUNDING	18
VII. CRYPTOCURRENCIES	19

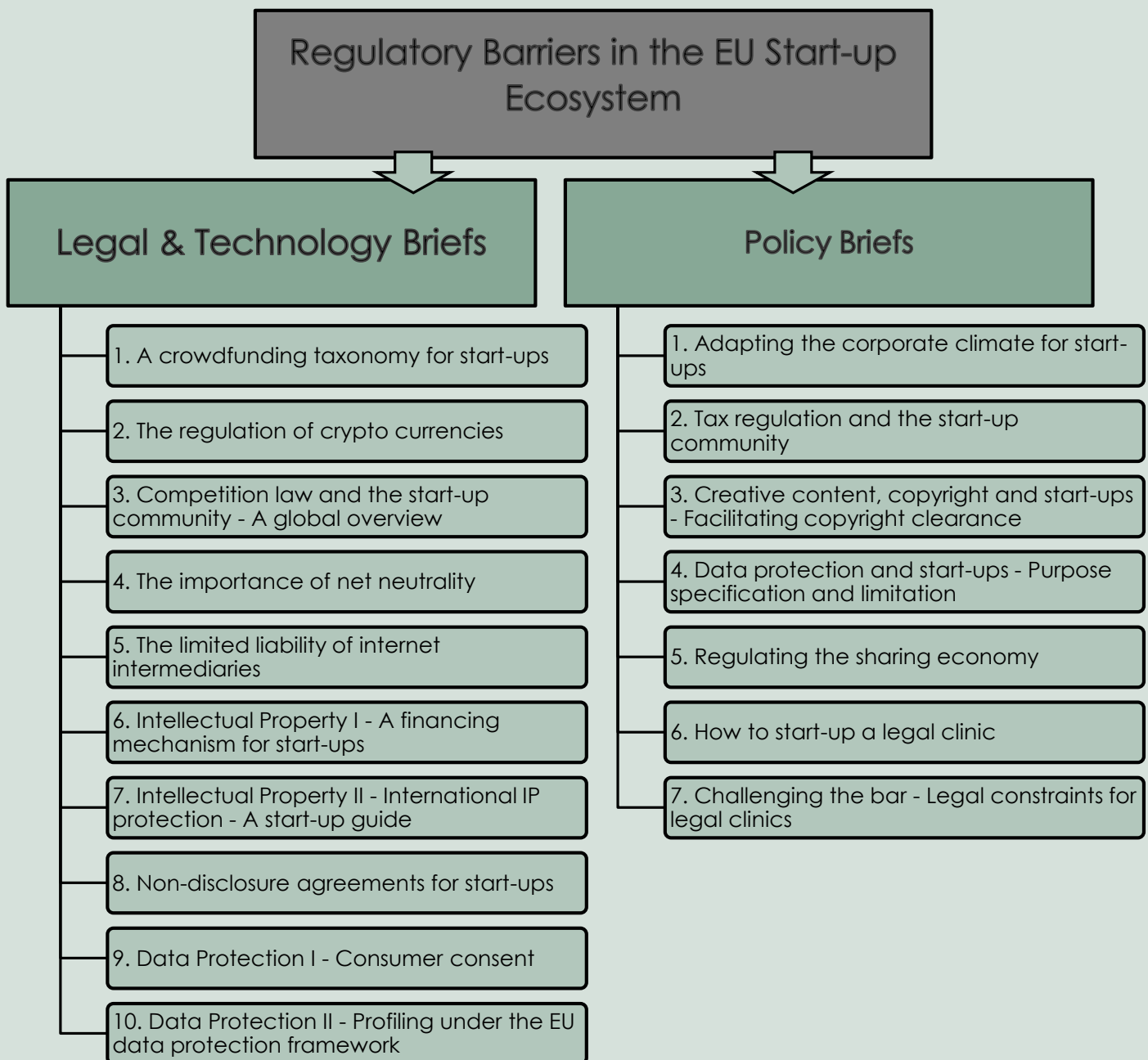
IX. HARMONIZATION MATTERS - THE IMPORTANCE OF THE DIGITAL SINGLE MARKET STRATEGY	19
POLICY RECOMMENDATIONS	20
<u>VI. FUTURE TRENDS</u>	21
I. FUTURE OF MOBILITY	21
II. BRICKS AND CLICKS	21
III. CONNECTIVITY AND CONVERGENCE	21
IV. DATA MINING	22
V. 3D PRINTING	22
CONCLUSION	23
POLICY RECOMMENDATIONS	23
<u>VII. ADDENDUM - POLICY ISSUES AS IDENTIFIED BY START-UPS</u>	24
1) DIGITAL SKILLS	24
2) ACCESS TO TALENT	24
3) ACCESS TO CAPITAL AND INVESTMENTS	24
4) THE FACILITATION OF INCORPORATION	25
5) OPEN DATA	25
<u>VIII. ILINC RECOMMENDS - SUMMARY</u>	26
<u>ANNEX I: OVERVIEW OF ILINC LEGAL AND TECHNOLOGY BRIEFS</u>	29
<u>ANNEX II: OVERVIEW OF ILINC POLICY BRIEFS</u>	31

The iLINC Thought Leadership Programme

The **iLINC Thought Leadership Programme** crystallises the thinking of the iLINC Network on a number of key legal issues and challenges that are relevant for the ICT start-up community. The main objective of this programme is to be the 'iLINC voice', to help catalyse regulatory change and to help build legal awareness through the ICT innovation ecosystem. The 'Regulatory Barriers in the Start-up Ecosystem' brief acted as an evolving document throughout the span of the iLINC project. As our understanding of start-up communities increased, our knowledge could be funnelled into the creation of the iLINC legal and technology briefs and policy briefs.

Legal and Technology briefs have been developed specifically for ICT start-ups to help develop their awareness on key legal issues, many of which have a strong technology component. Examples include the legal challenges associated with crowdfunding and the importance of net neutrality.

Policy briefs have been prepared with the aim of improving legislation to help ICT start-ups to realise their full potential. These are directed at everyone (and not just policy makers) who has a roll to play in designing an innovation-friendly, start-up environment.



The iLINC thought leadership diagram – An overview of the contents of these documents and why these topics were chosen can be found as an annex to this document.

This Policy Brief aims to provide policy makers an overview of the European start-up environment. In particular, this document will focus on the legal challenges start-ups face in the digital environment and identifies those legal obstacles that matter most to digital starters. The results presented in this document are based on the iLINC survey. This survey was developed within the framework of the iLINC project and has gathered information from approximately 100 start-ups currently active within the EEA.ⁱ Although these figures should not be considered 100% representative, they do provide a good indicator of the legal mind-set of the start-up communities. In order to enhance our research, additional sources have been consulted. In some instances, we have combined our figures, with figures received from the Humboldt Institute for Internet Gesellschaft.ⁱⁱ We could also draw upon our experience as a network of law incubators: through our many conversations with start-ups, we have gained expertise with relation to the legal challenges of the start-up community. Statistical research has been further complemented with information from various start-up news sources, such as start-up manifestos.

I. Introduction and outline of the Policy Brief.

This policy brief discusses the legal challenges of digital start-ups. By identifying those areas that start-ups have difficulties with, policy makers should be able to better anticipate the needs of these small digital undertakings. It should also provide policy makers with an overview of legal areas for which start-up communities should be consulted when regulatory reforms are planned. This goal will be achieved by first providing a general overview of the start-up market (Section 2). In this section, the active industries and financial situation of start-ups will be analysed. This background information is necessary to frame the legal challenges of start-ups. This analysis is followed by an extensive overview of the various legal questions start-ups are confronted with (section 3). Section 4 will detail how digital starters tackle regulatory issues. In particular, we will analyse whether or not start-ups seek professional legal advice. As a summary conclusion, policy recommendations will be formulated to increase legal awareness among start-ups. In section 5 our knowledge of the digital environment will be taken to the European level. In particular, this section will discuss the cross-border barriers towards digital innovation. This section will also conclude with a number of policy recommendations. The final section will outline a number of trends that are likely to affect the

current regulatory framework. Although some of these trends are still nascent and do not necessitate acute regulatory action, policy recommendations will be defined in order to ensure the inclusion of start-ups in the reform process. As an addendum, this policy brief will outline the policy issues as identified by the start-up communities themselves.

II. The Start-Up Market

The 'entrepreneurial explosion' is no longer confined to Silicon Valley; rather we are witnessing a global expansion of start-up activities. Most major cities now feature a growing start-up community: they house accelerators, co-working spaces and of course an active number of start-ups.ⁱⁱⁱ London, Berlin, Amsterdam and Paris are leading start-up cities within Europe.^{iv} But why did so many promising start-ups enter the market? In a recent study, Compass.co discerned four reasons that could account for the recent rise of digital starters^v:

1. Start-ups can now be built for thousands, rather than millions of dollars.
2. A higher resolution venture finance industry
3. Entrepreneurship developing its own management science
4. Increased speed of consumer adoption of new technology.

These four elements seem to have provided an excellent breeding ground for start-ups to mushroom.

The following sections will take a closer look at the EU start-up environment. In order to make a correct assessment of the legal challenges of digital start-ups, we will first discuss the industries start-ups are active in and provide background information on their financial situation. A better understanding of the business environment will facilitate the identification of legal challenge areas and need for legal advice.

Business Diversity

For start-ups, innovation is key. As a consequence, the start-up environment shows great diversity. Even though similar business ideas can be found, solutions developed by start-ups to tackle similar problems are multiple and varied. Still, a common thread can be found: the majority of start-ups encountered by iLINC network partners would be described as *tech* start-ups, i.e. they develop highly technological products. Indeed, on average, 89 percent of European start-ups have at least one tech founder.^{vi} Moreover, their products are often offered or implemented through *digital*

means. Hence most tech start-ups are digital start-ups. Digital start-ups do not necessarily produce physical products; rather their core activity consists of the development of soft- or hardware, whereby physicality – if present - is merely the conduit for a technical innovation.

Considering the diversity encountered in practice, it is rather surprising that 60 percent of start-ups participating in our survey consider themselves to be active in the ICT/media sector (figure 1). The remaining 40 percent are unevenly spread across a high variety of industries (financial, healthcare, retailing, manufacturing, retail and others). Looking at the individual business descriptions given by start-ups though, these figures may be misleading. The descriptions provided show a higher level of divergence, with more active industries represented.

The high percentage of ICT/Media start-ups could be attributed to the means used by start-ups when

noticed as well. Both industries are underrepresented in this chart.^{vii}

Financial Homogeneity

Start-ups may show great diversity, their financial situation seems rather homogenous. Our figures indicate that roughly 40 percent of start-ups have no current revenue stream or income and 30 percent of them have a revenue stream of 30.000€ or less. 20 percent of start-ups have a revenue stream higher than 30.000€ and 10 percent earn more than 100.000 €. High earning start-ups are rare: only 5 percent of start-ups currently earn more than 500.000 €. In other words, the majority of start-ups has either no income or makes less than 30k. Of course, this should not be too surprising. Start-ups are in the process of starting a business. During the start-up phase it is quite normal that little revenue is generated. They are still in the process of developing a product or getting ready for their product launch. However, these figures do illustrate the importance of external funding.

The budget available to start-ups is limited. Without additional funding start-ups may enter into debt, especially if the seed and start-up phase is R&D intensive. Start-ups therefore need access to capital in order to compensate for their lack of income. Most start-ups actively look for external funding. According to our survey 67 percent of start-ups have received funding through grants, 57 percent through loans and 64 percent of start-ups have sought equity funding, such as venture capital, angel and crowdfunding. 42 percent of start-ups have found funding through other channels, such as bootstrapping.

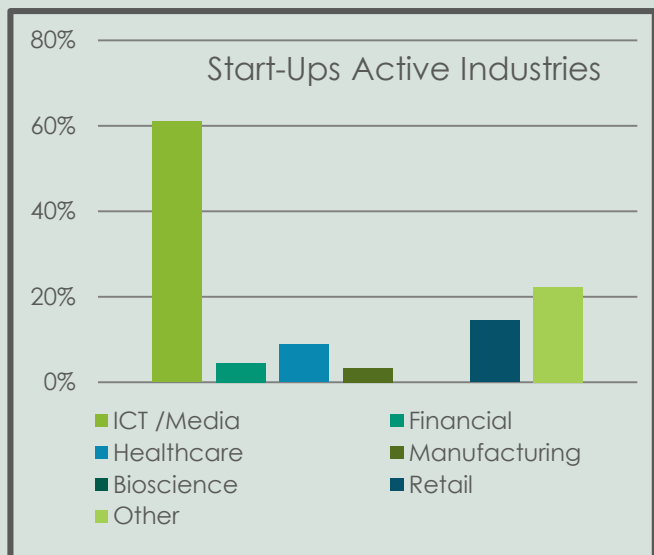


Figure 1: Active Industries; Source: iLINC Start-Up Survey

developing or marketing their products. A strong reliance on ICT and media technologies can be discerned. Additionally, it may not always be as easy for start-ups to pinpoint the exact industry they are active in as their business activities show convergence and overlap. For example, a start-up may develop a social media platform and consider this platform to be its core business, but supplement this with additional business models, such as offering retailers access to the back-end of a platform in order to achieve a greater connection with end-users. Start-ups also showcase great flexibility. In recent years a boom of the digital health and FinTech sectors could be

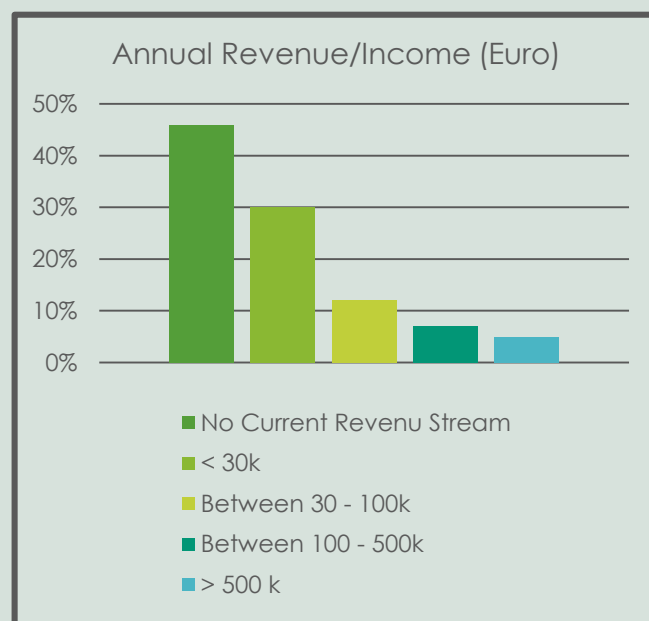


Figure 2: Annual Revenue/Income of start-ups; Source: iLINC Start-Up Survey

III. Legal Challenges of Start-Ups

One of the main goals of the iLINC start-up survey was to establish the legal challenge areas of digital start-ups. In this section we will further assess the understanding of start-ups with regard to the regulatory environment governing their business. This legal analysis will conclude with a final chapter in which we will discuss whether start-ups have indeed sought legal counselling with relation to these challenges. In the subsequent chapter we will assess whether start-ups face cross-border regulatory challenges in relation to these legal domains.

1. Encountered Legal Domains

In order to determine the most pressing areas, it is first and foremost necessary to outline the legal areas digital start-ups encounter while performing their core activities (figure 3). In general, most start-ups encounter multiple legal areas throughout the various stages of development. Indeed, approximately half of the participating start-ups encountered the following legal domains:

- Privacy and Data Protection
- Electronic Communications
- E-Commerce
- Non-Disclosure Agreements
- Contract and Consumer Law
- Terms and Conditions
- Corporate Structure and Transactions
- Intellectual Property Rights
- Other legal areas, such as tax and employment law.

Some start-ups indicated that they have ran into all of these domains. The iLINC network does like to stress that these are the areas encountered as *perceived by start-ups*. Even though a brief explanation was provided to start-ups concerning each legal domain, they may have had difficulty in grasping the full scope of the domains. The lack of legal awareness among start-ups - which we will elaborate upon later in this brief – may already be indicated in figure 3. For instance, only 46 percent of start-ups claim to have encountered legal issues concerning their corporate structure or corporate transactions. However, all start-ups will require to incorporate their business, which is regulated on the national level. Nevertheless, three main legal areas stand out: privacy and data protection, intellectual property rights and terms and conditions. As we will see later, these areas are also deemed most important by start-ups when it comes to legal advice.

Of course, some overlap naturally exists between the encountered legal domains. Considering the prevalence of innovation in the digital environment, intellectual property rights are deemed necessary as a protection mechanism for innovation. To ensure protection and safeguard confidentiality in relation to the innovation, start-ups often look into non-disclosure agreements as well. Even though the usefulness of non-disclosure agreements is debatable, start-ups nonetheless enquire law firms and legal clinics concerning the draft of confidentiality agreements.

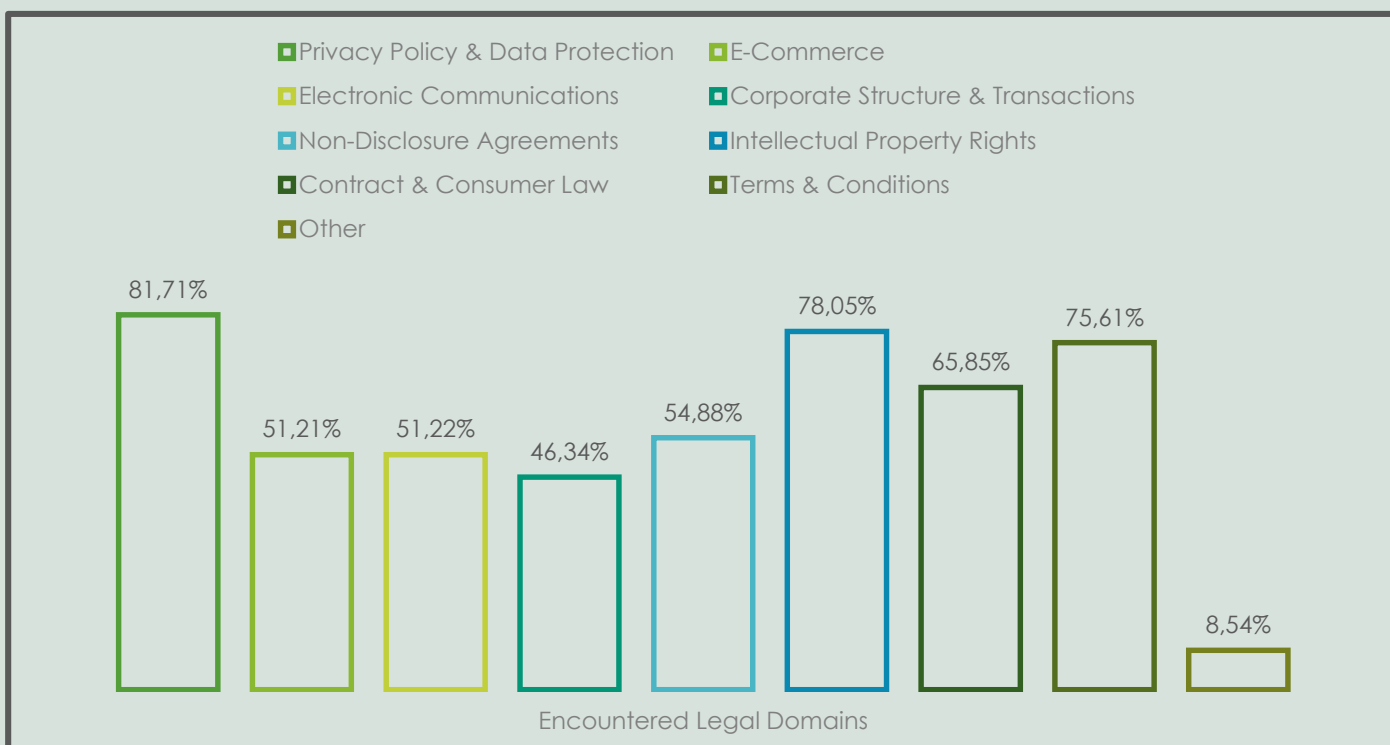


Figure 3: Encountered Legal Domains; Source: iLINC Start-Up Survey

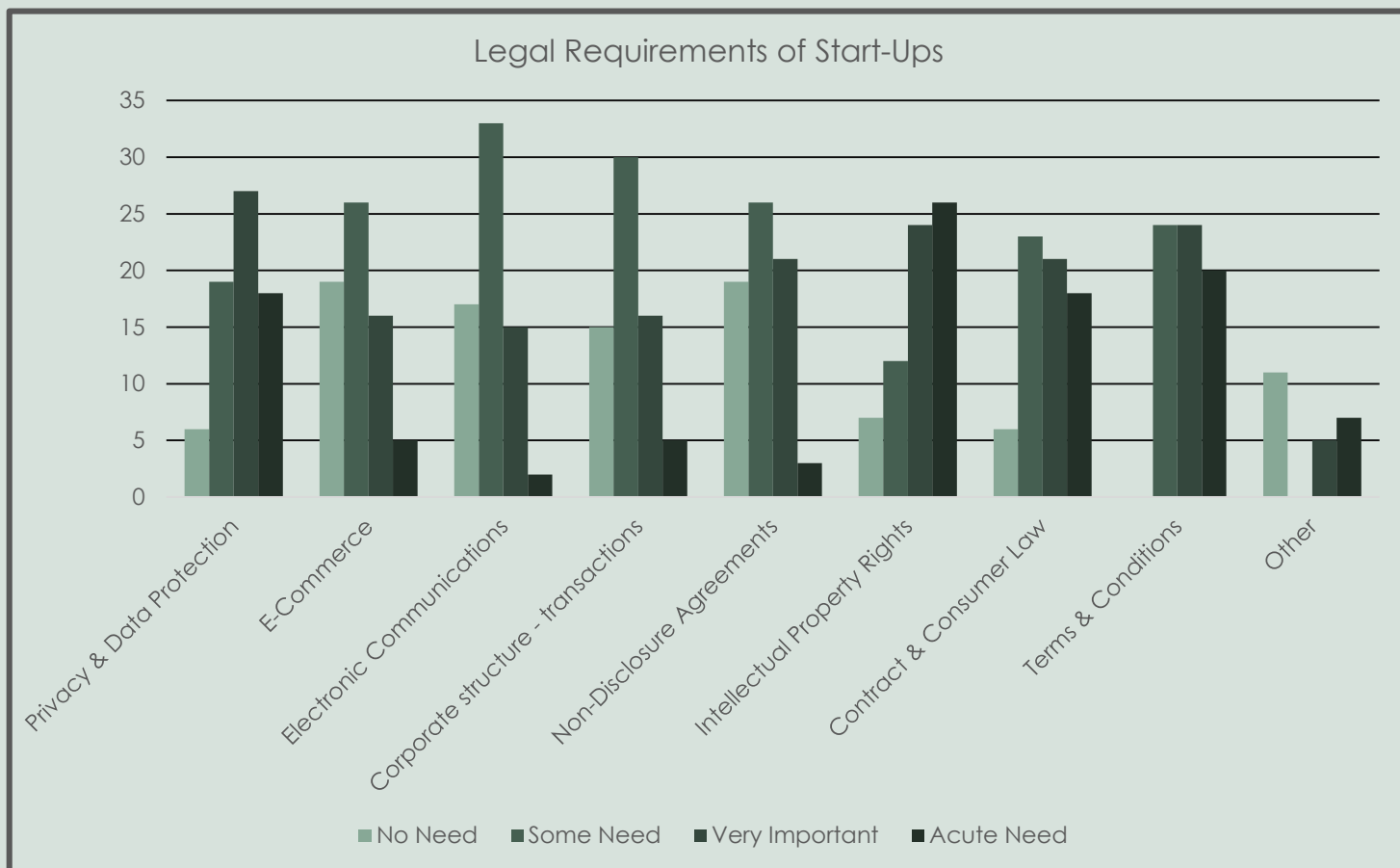


Figure 4: Legal Requirements of Start-Ups; Source: iLINC Start-Up Survey

2. Perceived Importance of Legal Domains

The iLINC survey also gauged start-ups' perceived importance of the legal domains encountered. Even though most start-ups are confronted with a diverse set of legal areas, not all areas are considered equally important. Perceived importance has been estimated by start-ups' need for legal advice (Figure 4). Indeed, if start-ups consider legal advice to be most acute for a given legal area, one can assume that this legal domain is perceived as more important.

Here we also notice that the three previously mentioned domains, i.e. privacy and data protection, intellectual property rights and terms and conditions, play a key role. Most likely it is exactly because start-ups feel that they encounter these domains the most, that they also deem those areas to be the most important. At least, start-ups consider the need for legal advice in these areas to be most pressing. iLINC experience nevertheless shows that start-ups require assistance in a wide variety of legal topics. Therefore, it may be relevant to further elaborate upon the relevance of the various legal domains for start-ups.

- **Data** is considered the raw material for innovation. Indeed, data serves many purposes and data collected from end-users or

third parties is often relied upon. For example, data can be analyzed in order to further enhance the core product or to offer end-users a tailored experience. Consequently, many start-ups feel the need to receive advice related to data protection legislation as they want data collection to happen in a legally compliant manner. Privacy legislation, which receives more and more media attention, is on start-ups' radar.

- The dominance of **Intellectual Property Rights** (IPR) is unsurprising as well. Most digital start-ups perceive their IP portfolio as a mechanism to stay ahead of competitors. Intellectual Property Rights play an important role in both the monetization (e.g. licensing and market branding) and securitization of their innovation. If innovation is left unprotected, competitors can freely copy a start-up's valuable idea. Moreover, legal protection also increases the value of start-ups with investors.
- Every undertaking whether active online or offline and irrespective of whether services are provided to consumers or other undertakings has encountered contracts, and thus requires, a solid understanding of **contract law**. If the

end-user is a consumer, **consumer law** will also be taken into account.

- Even though **'Terms & Conditions'** is not a legal domain as such, but rather a condensed rendering of obligations imposed by other regulatory domains, including data protection, IPR, contract and consumer law, start-ups consider the need for good 'terms and conditions' indispensable. Start-ups realize that these conditions contain important legal requirements and also serve a protective purpose. Moreover, the presence of terms and conditions on every website and digital platform, has made start-ups aware of this necessity.
- Although digital start-ups stated that they **encounter electronic communications law**, the main reason why there is ultimately less need to obtain legal advice in this area may be the following: electronic communications regulation is primarily aimed at creating a level playing field, whereby legal obligations mainly target the natural monopolists of the last century. There is thus less need for ICT start-ups to take into account this legal domain as the obligations imposed do not take aim at them. Rather, the regulation aims to protect these start-ups. This legislation is nonetheless important for ICT start-ups as it informs start-ups of their rights, e.g. concerning net-neutrality.
- The need for legal advice in **E-commerce** legislation is considered less pressing. Still, this is an important field of law. Many digital start-ups fulfil an intermediary role in the digital environment. The EU E-commerce framework governs their liability as it has imposed a limited liability regime. Moreover, the FinTech industry is booming, which also requires start-ups to have a good understanding of the legal framework governing online payments etc.
- **Corporate Law** is an integral part of the early start-up phase as start-ups will look to incorporate their business. Nevertheless, it seems that corporate law is perceived more important as soon as start-ups start gaining more annual revenue.

3. Readiness for Future Regulatory Changes

The iLINC start-up survey also aimed to assess start-ups' readiness for regulatory changes. Technological advancements are rapidly increasing and are likely to outpace the current

legal regime. Indeed, most areas covered by the survey will undergo regulatory changes in the near future: the general data protection regulation, the now to be implemented consumer rights directive, the planned copyright reform, the accepted connected continent proposal... This does not only apply to those areas that were deemed most important to start-ups; other areas are likely to be revised as well.

The results from the iLINC survey were rather alarming. Even though 36 percent of participating start-ups considered themselves somewhat prepared for future, this figure is still low. Only 13 percent of start-ups felt they were very well prepared. On the opposite side, 21 percent of start-ups felt not at all prepared for future changes. What seems most worrisome however, is that 31 percent of participating start-ups do not know about future changes about to occur. In other words, most start-ups are developing products oblivious to the legal framework. This lack of legal understanding can severely damage the business prospective: once the product launches it may be too late to reverse the non-compliant components.

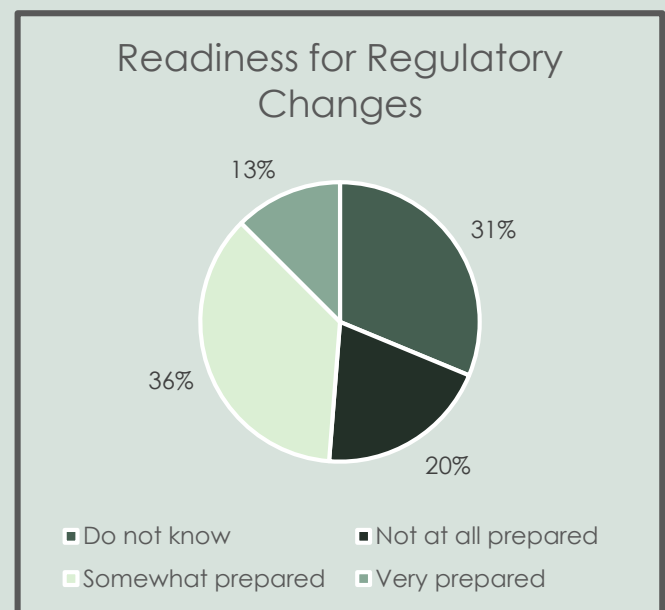


Figure 5: Readiness for Regulatory Changes; Source: iLINC Legal Start-Up Survey.

4. Recurring legal themes in the encountered legal domains

Considering start-ups' lack of legal knowledge, they found it difficult to articulate their legal problem areas. Even though start-ups were asked to do so, very few start-ups actually provided a clear answer on this topic. Rather, start-ups have a vague idea of what they should worry about. This means that most often, legal issues will be discovered once the start-up has interacted with a legal professional. The following section provides an overview of the legal challenges faced by start-ups, as encountered by legal clinics. This is by no means an exhaustive list, rather a list of common legal questions asked to legal clinics within the iLINC network.

The iLINC network recognizes that it is difficult to deduce policy recommendations from the mere observation that start-ups need guidance in certain legal areas. Indeed, it is not because start-ups need assistance in legal areas that the legal framework needs to be changed. Nevertheless, the list provided within this section may grant additional insight as to what the problem areas for start-ups are. Taking these challenges as a basis, a deeper understanding concerning true legal barriers may be derived.

Even though this list is structured using the themes as presented by the start-up survey, overlap may exist between the questions. For instance, we have chosen to categorise an agreement on intellectual property assignment under the header intellectual property, even though in essence it is a matter of contract law.

I. Corporate Structure and Transactions

1. The incorporation of a business is often one of the first enquiries of start-ups. Rather than operating as a sole proprietor or operating from an oral partnership agreement, start-ups are advised to incorporate their business as soon as possible. However, start-ups require legal assistance as to what business structure is best suited for their activities. For instance, what would be the consequences of a given structure with relation to liability?
2. Start-ups often have humble beginnings. What may have started as a project among friends, soon turns into a proper business. It is important for start-ups to have a clear view of the structure of the company, the responsibilities that are shared and the allocation of shares. Although start-ups may not be aware of this,

investors often look into the structure of a company. Indeed, well-structured organisations, with proper liability and share allocation, present less risk.

3. Start-ups seeking additional funds or start-ups in the process of seeking external investment from business angels or venture capitalists may require the drafting of investor contracts. These contracts can serve a twofold purpose. First, start-ups may want to include confidentiality clauses in order to safeguard their intellectual property. This, however, is often not advisable. Second, investors, in turn for their investment, often want part of the ownership of the business, such as through equity or convertible stock. Through investor contracts, start-ups want to ensure that their position or creative control is not entirely jeopardized when in search of funding.

II. Contract and Consumer Law

1. Start-ups are protective of their innovation and are often reluctant to share their idea with employees or investors. In order to protect their confidential information, start-ups often enquire concerning the draft of non-disclosure agreements. These agreements can be especially useful at an early stage when collaborating with potential business partners – although it is ill-advised to present an NDA to potential investors. When entering into effective collaboration, start-ups want to implement a certain level of confidentiality into their contracts through confidentiality clauses.
2. It is not unheard of that start-ups copy the Terms and Conditions of other websites. They need assistance in understanding the reasoning behind these conditions and the necessary clauses to be put in them. This is important as the terms and conditions set out the expectations and rights of the start-ups' end-user. Start-ups need to take into account consumer law. Terms and conditions should also contain clauses on third party rights (if present) and applicable law and jurisdiction.
3. Start-ups require assistance concerning service level agreements (SLAs) on two levels. First, the start-up may offer a service to their end-users or third parties. In this scenario they need counselling in drafting SLAs to determine their liability in case of non-performance. Second, start-ups may depend on services provided by

others, e.g. cloud storage. Start-ups must understand this third party's SLA to assess possible repercussions.

III. Privacy and Data Protection

1. According to article 8 of the European Charter of Fundamental Rights, data must be processed fairly, for specified purposes and on the basis of the consent of the person concerned or some other legitimate basis laid down by law. Most common for start-ups is to acquire the consent of their end-user as a legal basis for their processing activities. Such consent also increases trust and transparency. Start-ups need guidance on the mechanisms that need to be implemented in order to safeguard. Moreover, informed consent is a necessity when tracking users via cookies.
2. Profiling, both on the individual and group level, may play an intrinsic role in a business plan of a digital starter. It can help in improving services as well as the overall performance of the undertaking. While an easy access to increasingly sophisticated data mining systems and cheap data storage make profiling an attractive option for a start-up to determine business priorities, data protection legislation must be respected. Start-ups must have guidance on the legal limits of profiling.
3. It is not unlikely for a start-up to partner with other undertakings. Cloud storage may be provided by a third-party. A start-up may also provide services to a business client. When both parties generate and share data, there must be a clear understanding as to who the original owner of the data is. Additionally, start-ups must be made aware of data transfer requirements: will data be stored in the EU or transferred to non-EU countries?

IV. Electronic Communications

Electronic communications law is rarely tackled at start-up clinics. For instance, out of 50 start-up requests received by the KU Leuven ICT Law Incubator, only one start-up required legal advice specifically in relation to electronic communications regulation. Questions may relate to:

1. The applicable law when using telecom resources from various countries.

2. The protection of the customer in case a contracted telecom operator does not provide the necessary services.
3. The legal position of over-the-top content providers.

V. E-Commerce

1. Many start-ups act as an intermediary in the online environment. They offer their end-users a platform. These start-ups do not necessarily engage directly with their users. For intermediary service providers it is important to determine their potential liability for legal infringements by their end-users. For start-ups it is important to know whether they benefit from the limited liability regime as set out by the 2000 E-commerce directive.

VI. Intellectual Property Rights

1. Given the importance of intellectual assets, a start-up will often seek to protect his intellectual creations. A legal clinic or professional will then ascertain what protection mechanism would be best suited for the innovation. For instance, in a rapidly developing sector it may be ill-advised to launch an expensive patent application knowing the invention is merely incremental. In other words, start-ups need guidance on the different types of protection mechanisms and the formal protection requirements.
2. In some instances start-ups may want to assign intellectual property, i.e. transfer the ownership of IP from one person to another. This may be the case when the IP has been developed with a partner who wishes to leave the company. This assignment requires a formal agreement between both partners.
3. Start-ups may build upon intellectual property of others, whether as part of a partnership or not. In these instances, start-ups often wonder the limits of using other person's IP and the consequences of having used that IP. This often requires an assessment of the relationship between background and foreground IP. In sectors reliant on software, the relationship that needs to be assessed is the relationship between proprietary and open source software.

4. Start-ups may also have more specific questions relating to intellectual property, such as the use and protection of Application Programming Interfaces (APIs) and crawling techniques.

VII. Other

A. Health and Medical Law

1. Start-ups that develop applications that can be used in the medical sector wonder whether their health application should be considered a medical device under EU legislation.

B. Financial Law

1. Start-ups offering new types of services in the financial sector should be made aware of the legal requirements set out by the various EU directives. Legal obligations may be derived out of their function as a third party payment provider or issuers of electronic money.
2. Start-ups may also be informed concerning the lack of a unified legal framework concerning cryptocurrencies and potential consequences thereof in the various Member States.

C. Migration Law

1. In a digital age, the working environment is not restricted by national boundaries. Start-ups may want to hire foreign nationals. For instance, a start-up idea may have started on an Erasmus trip or foreign employees may be more attractive due to their expertise in a certain technological area. In these cases, migration law may have to be considered in order for start-ups to determine what the best visa would be for a future employee.

D. Employment Law

1. Entrepreneurs may have started a business 'on-the-side', i.e. they are under employment with another firm. This may require an assessment of their current working position in order to determine what they can or cannot do.
2. Start-ups may wish to expand and hire additional personnel. At this point, a start-up requires a formal employment agreement in order to establish the mutual relationship between employer-employee: What does the start-up require from the employee? In turn,

what will be the employee's remuneration and what are his or her rights?

3. A work relationship is not merely governed by the formal employment contract. Like any other business, a start-up will have to take into account various working regulations implemented at both the national and international level. These also impact the business as they may detail the maximum a start-up should expect from his employees, for instance with relation to working hours.

E. Tax Law

1. Start-ups need to pay taxes. Especially since the introduction of the new VAT directive, start-ups need additional guidance. For purchases made in the digital environment, the new VAT regime details that the level of tax that needs to be paid depends upon the legislation of the country of the consumer.

IV. Understanding the Regulatory Environment – Legal Awareness – General Observations

Having ascertained the regulatory challenges, both national and international, of start-ups, we will now assess whether start-ups have sought the legal counselling necessary to overcome these barriers. First, we will assess start-ups' general understanding of the regulatory environment. Following this analysis, we will investigate whether or not start-ups effectively seek advice.

I. General understanding of the regulatory environment

Our survey indicates that start-ups are developing a better understanding of the regulatory environment governing their businesses. Roughly 60 percent of start-ups feel that they begin to understand the legal environment. 26 percent of start-ups consider themselves to have a good understanding of the legal environment. Only 16 percent have little or no understanding of the legal issues affecting them. Moreover, our figures show that a thumping majority of start-ups would indeed like to know more about the legal issues that may impact their business.

Even though start-ups are at least developing a better understanding of the legal issues affecting their business, true legal knowledge is still lacking. When these figures were compared with those start-ups already having engaged in legal counselling, the numbers are slightly more positive. In instances where legal counselling was sought, 36 percent of start-ups felt that they had a good

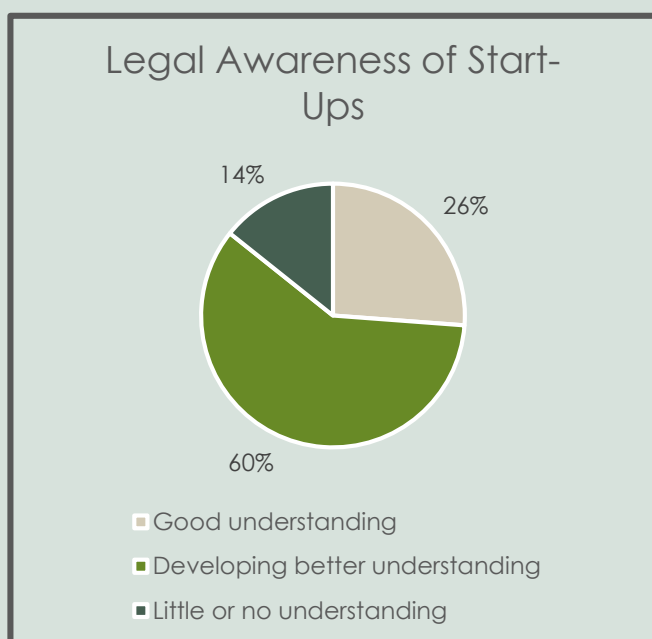


Figure 6: Legal awareness of start-ups; Source: iLINC Start-Up Survey (84 start-ups responded)

understanding of the legal issues affecting them and 55 percent were developing a better understanding. However, upon having received legal counselling, only 8 percent of start-ups indicated to have little or no understanding of their legal issues. Consequently, obtaining legal advice does help start-ups in understanding their regulatory environment.

II. Start-ups and Legal Counselling

Obtaining legal advice has an undeniable positive effect on start-ups' understanding of the regulatory environment. Yet, how many start-ups do indeed seek professional legal counselling? This question was linked to the perceived importance of start-ups of legal advice. 56 percent of responding start-ups had obtained legal advice. Start-ups that had not yet obtained legal advice, did not refute the importance of advice though.



Figure 7: Importance of legal advice; Source: iLINC Start-Up Survey (79 start-ups responded)

Similar results were found by the HIIG legal clinic (see figure 5). The HIIG has asked start-ups participating in their clinic program to indicate whether or not they had obtained legal advice prior to attending the clinic sessions. Their results found that the majority of start-ups seek legal advice through secondary channels, such as template and friends.

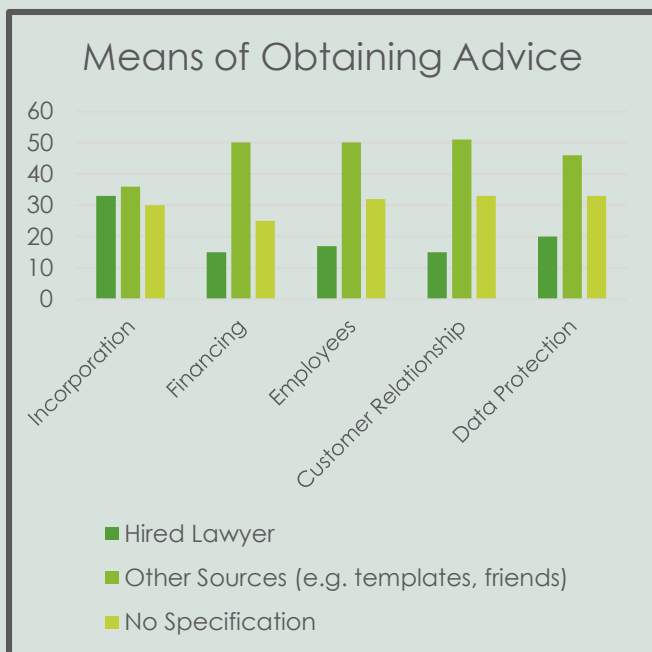


Figure 8: Means of obtaining legal advice; Source HIIG Legal Clinic (99 start-ups responded)

These figures are rather alarming. They indicate that roughly half of the start-ups develop their product without having consulted someone with legal knowledge. One might argue that legal advice is not crucial during the development stage, as contracts are not yet needed. However, the importance of legal advice in the development stage is not to be underestimated, as early confirmation whether the business project would be legally compliant once the product has launched can make or break a project. Understanding the legal obstacles ahead of product launch allows start-ups to assess the legal risks of their product. Once the product has hit the market it may be difficult to revert the production process in an effort to be legally compliant.

One might assume that once start-ups start generating revenue they may be more inclined to actually seek legal advice. Surprisingly, our survey indicates that even when start-ups have started generating income they do not necessarily solicit legal counselling. Indeed, 50 percent of start-ups without current income have sought legal advice. A 10 percent increase can be discerned once a start-up starts earning income: approximately 60 percent of start-ups generating revenue under 30.000€ have sought legal advice. This figure remains roughly the same (55 percent) for starters with an income between 30.000€ and 100.000€. Once start-ups generate more than 100.000€, legal advice acquisition is more likely: 66 percent. Yet, this increase remains rather modest. A true difference can be noticed for start-ups having

generated more than 500.000€. All the responding start-ups within this category did obtain legal advice.

These figures illustrate that even if start-ups start generating revenue, there seems to be little incentive to actually seek legal counselling. Advice will only be sought at the moment the corporation has gained a critical mass, i.e. once their revenue stream reaches 500.000€. In other words, the level of income does not necessarily have an impact on start-ups' legal service acquisition.

III. Reasons for not obtaining legal advice

As indicated above, start-ups consider legal advice to be important. Our survey also shows that start-ups are very well aware of the risks of not having obtained legal advice. Start-ups believe that their company could suffer financially and would be more likely to fail if no legal advice were to be obtained. Additionally, they fear that their company would become less attractive to potential funders if legal risks would be present. Furthermore, start-ups are aware that an early focus on legal issues would save time: during later development stages they would be able to concentrate on other business priorities, such as marketing.

Why then do start-ups not seek legal advice? Some participating start-ups indicated that even though they do not have a legal advisor, they do attend legal lectures or seek for advice online. Others simply stated that they do not know what advice they should get first. Start-ups also have difficulty finding the right legal expert. Furthermore, legal advice may simply not be a priority of the start-up in question.

The main reason for not obtaining advice is budgetary however: start-ups do not have the budget to obtain good and affordable legal advice. Indeed, 90 percent of start-ups have indicated that the cost of legal advice is the main reason that has prevented them from receiving legal advice and that additional budget for legal advice would be useful. Important to note is that no start-up found legal advice to be not beneficial. Of those start-ups seeking legal advice, the majority did receive legal advice from a legal advisor specialising in dealing with start-ups (66 percent). They did not however receive a special deal for legal services as a start-up: only 15 percent of those who had obtained legal advice received a special or fixed fee deal.

5. Policy Recommendations: Increase Legal Awareness among Start-ups

Our figures indicate that start-ups lack legal awareness. The Humboldt Institute's legal clinic confirms this conclusion. They found that of the 187 legal issues discovered by their legal clinic, 55 were not identified before the clinic session. Nevertheless, legal compliance has been identified by start-ups as an important success factor.

As a consequence, start-ups, when developing their innovation, often do not take into account the relevant legal framework in a sufficient manner. In highly innovative fields, this observation is particularly troublesome considering the fact that within those fields there is interplay between various legal domains. For instance, start-ups utilising crawling techniques may focus on data protection legislation, without considering the intellectual property framework.

Raising awareness concerning the legal framework serves many purposes. *First*, legal awareness raises the protection of both the start-up as well as the end-user. Start-ups are less likely to be subject to liability. The end-user is protected and trust is increased. Even though a start-up may feel that legal requirements hinder the innovative character of their business, start-ups could be made aware of the importance of the law. Legal knowledge allows them understand that legal obligations have a societal function. *Second*, if start-ups want to change the legal environment, they must build an understanding of the underlying governing

principles. Without understanding this, start-up communities will have difficulty in substantiating their claims for reform.

- 1) *Universities should be stimulated to establish legal clinics as these can (partly) mitigate the lack of legal awareness among start-ups. Legal clinics serve a twofold purpose: a) they provide start-ups a cost-friendly alternative to professional legal counselling and b) they give students a practical hands-on learning experience during their education. Moreover, figures from the ILINC survey illustrate that most start-ups are supportive of legal clinics and would likely participate in their programs*
- 2) *The academic and private sector should cooperate in setting up alternative channels to reach start-ups with legal information. Legal clinics cannot fulfil all demand, and as already demonstrated, only half of start-ups seek professional legal counselling. Consequently, many start-ups are currently operating without taking adequate account of the law. Most start-ups will be unable to seek on-going professional legal advice due to budgetary reasons. Start-up toolkits, e.g. key contract templates, by law firms, or the organization of legal workshops specifically targeting start-ups, can facilitate the transfer of legal information to start-ups.*
- 3) *Law firms could be stimulated in providing fixed or special deals for beginning undertakings.*

4) Legal actors, such as law faculties, law firms, legislators and regulators, and start-up communities should strive towards establishing a mutual understanding between the legal and technological environment.

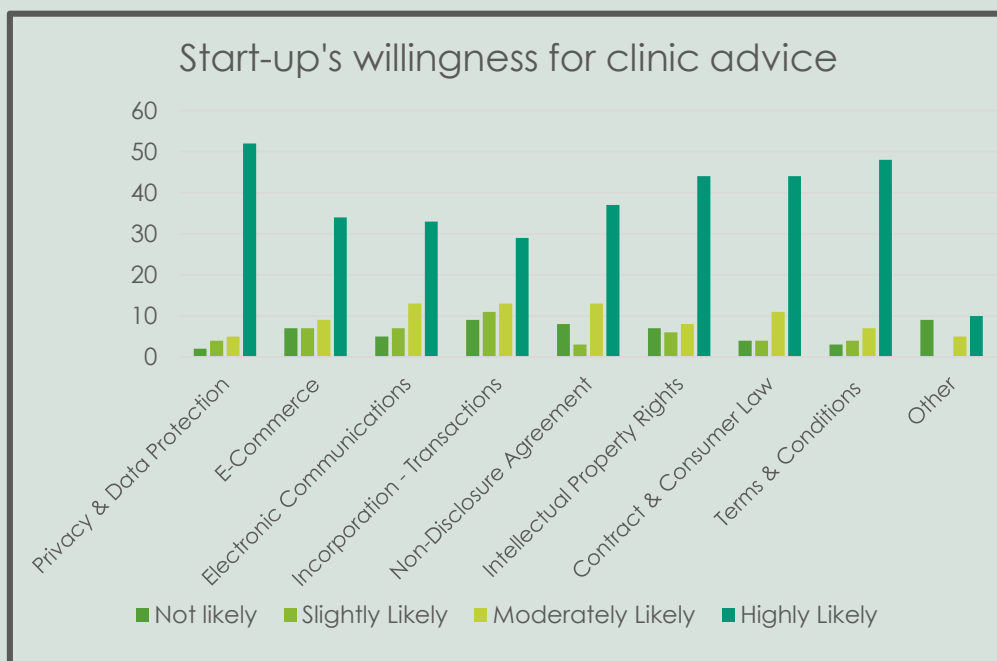


Figure 9: Start-ups and Clinic Advice; Source: iLINC Start-Up Survey

V. Cross-Border Legal Barriers

The iLINC survey confronted start-ups with the question whether they had encountered legal problems due to jurisdictional boundaries. 41 percent of the responding start-ups found that this was indeed the case, 30 percent did not yet encounter such difficulties and 29 percent did not know whether this was the case or not. The percentage of start-ups that did feel they encountered jurisdictional boundaries is rather high. Indeed, cross-border operability is important for digital start-ups, who have the Internet as their main playground. The survey did not require start-ups to specify whether they were active on a cross-border level or not. Considering the general lack of legal awareness, one could assume that start-ups would have a tough time defining cross-jurisdictional boundaries. Taking into account the particular business nature of start-ups and based upon the regulatory challenges detected above, this section aims to identify the key legal cross-border barriers.

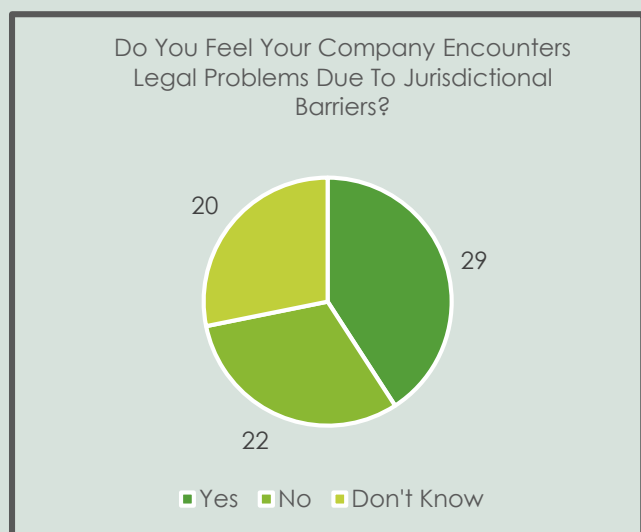


Figure 10: Cross-border barriers; Source: iLINC Start-Up Survey

I. Why Cross-Border Legal Barriers Limit Start-ups' Success

The reduction of cross-border legal barriers is of particular importance to start-ups. Start-ups have a different business model than traditional small-and medium sized undertakings. Start-ups often have a pre-defined goal and high aspirations. The key components to start-ups' success have been aptly phrased by the co-founder of Berlin-based marketing application AppLift Kaya Taner.^{viii} He considers the success of digital start-ups to depend upon three factors: the business model of the start-up and the scalability thereof, the market size and the velocity. For digital start-ups these factors are indeed important. Moreover, the regulatory

environment plays a key role in how a start-up could successfully achieve these factors.

Scalability: Scalability is the ability of a start-up to multiply its revenue with a minimal incremental cost.^{ix} A start-up is ready to scale when a proven product has been developed and when the business model has had success and is now ready to expand to new geographic markets.^x

Market Size: The EU has a strong position in the global trade of commercial goods and services.^{xi} In 2013, the EU was the biggest market in terms of important and export.^{xii} The EU market size is potentially bigger than that of the US and other regions. In principle, the EU should thus be a good starting environment for start-ups.

Velocity: Velocity refers to the speed at which a start-up can deploy. In a digital environment, speed should not be underestimated. Technology moves fast and digital undertakings are required to adapt fast to changes in the digital ecosphere. Start-ups need to anticipate market change and react quickly.

In light of these three key factors towards success, it is rather obvious that cross-border jurisdictional conflicts may have a tremendous impact on scalability, market potential and velocity. In particular, having to take into account a patchwork of 28 different Member States' legislation can be more than burdensome. Legal compliance, although necessary, reduces the speed at which a start-up is able to deploy when 28 different laws need to be taken into account. This also reduces scalability: in principle, a legal compliance check is necessary if one wishes to expand to other Member States. Even if the product and business model have been proven, the law acts as a barrier to scale. In turn, the market potential of a start-up could decrease if this de-incentivizes start-ups to expand to other markets.

The iLINC network does acknowledge that it is impossible for the European legislator to cater all regulatory reforms to the wishes of start-ups. Drafting policy necessitates a careful balancing act, whereby a variety of stakeholders need to be taken into consideration. Moreover, the EU should respect the principle of subsidiarity and Member States should be able to retain sovereignty. Yet, in some areas the EU legislator has already chosen to intervene through the implementation of harmonising measures. Some of the legal aspects that are hindering the development of start-ups could be mitigated by further intensifying this harmonisation. Even though such measures have

been taken for the majority of legal areas start-ups struggle with, harmonization remains limited if achieved through the implementation of Directives. Without clear interpretative rules, fragmentation will continue to exist. Concepts could be further clarified or interpreted by the Courts. Yet, this approach takes time and the occasion to actually clarify certain key notions may not present itself. In an ever evolving technological landscape such as the ICT sector, this may lead to a perpetual state of 'out datedness'.

Another option would be to provide uniform interpretation of certain regulatory concepts or principles through advisory boards, such as the article 29 Working Party. Legal uniformity should ultimately benefit every undertaking that wishes to remain active within the EU. Policy makers could also implement contractual standards: templates that will be accepted across the EU. Here, we would like to refer to the efforts that are being made in the area of consumer law and cloud contracting, more specifically the introduction of a common European sales law.

The following section outlines a number of key areas for start-ups that could benefit from a unitary, pan-European approach. Although this list is non-exhaustive, topics were chosen because they could be addressed via regulatory changes. This is why we elaborate on crowdfunding and not alternative financing mechanisms, such as business incubators and accelerators: crowdfunding currently requires a strong legal framework.

I. Contract and Consumer Law

EU consumer legislation has been fully harmonized within the EU through the introduction of Consumer Rights Directive 2011/83/EU.^{xiii} This directive instilled maximum harmonisation on certain aspects of contract and consumer law, in particular with regard to pre-contractual information and the right to withdrawal. This maximum harmonisation approach should benefit start-ups as pre-contractual obligations and the right to withdrawal form an integral part of one's terms and conditions. The iLINC network lauds the accompanying 'optional model' for the provision of consumer information about digital products.^{xiv}

Despite these maximum harmonisation efforts, consumer contract legislation nevertheless remains fragmented across EU Member States. For instance, several domains of consumer law are governed by a minimum ruleset, such as the Consumer Sales Directive (1999/44/EC)^{xv} and the Unfair Contract Terms Directive (93/13/EEC).^{xvi}

More importantly however, no specific rules exist with relation to the non-conformity of digital content products.^{xvii} This is an area still governed entirely by Member States legislation. The perspective of the online trader has been recognized however by the Commission in its Digital Single Market strategy. Furthermore, according to Regulation 593/2008, a business directing its activities to consumers in another Member State, has to comply with the contract law of the targeted Member State.

On the business to business level, contract law is also governed by Member State legislation. Transaction costs can be particularly high for small undertakings, start-ups included. Differences in contract law and additional transaction costs result in complexity, which in turn dissuades traders, SMEs in particular, in pursuing cross-border transactions.^{xviii}

II. Intermediary Liability and Online Platforms

Many start-ups fulfil an intermediary role in the digital environment. In many instances, start-ups provide a platform as a service. They act as a mediator and facilitator for their end-users who use the 'intermediary' platform as a means to offer goods and services. The 2000 E-Commerce Directive aimed to ensure the economic viability of intermediary services by implementing a limited liability regime. This was deemed necessary as it was recognized that intermediary actors should not be held responsible for illegal conduct of their end-users. Unfortunately, the Directive is showing its age. The exemption regime provided only applies to three specific types of information society services: mere conduit, caching and hosting.

However, in a rapidly developing technological arena, start-ups are no longer easily categorised. The liability exemptions are still relevant today. Still, jurisprudence diverges at the national level. Notice-and-takedown procedures remain fragmented as well. This disparity ultimately creates legal uncertainty and can negatively impact innovation. Even though online platforms should not be entirely exempt from responsibility – the availability of illegal content online must be addressed - clarity must be provided as to the applicability of the exemptions on online businesses.

III. Value Added Tax

Following the introduction of the new VAT regime, VAT liability for digital products is now determined by the country where the product is bought and no longer by the place of supply. Digital start-ups are likely to feel this impact. Because they offer

digital goods, they must take into account the VAT legislation of 28 member countries. This has increased the overall compliancy costs of small online undertakings. According to the Digital Single Market strategy, the compliance cost small online businesses face when trading in another EU country is estimated at 5000€ annually for each Member State where it wishes to supply. This places a heavy burden on start-ups, who as mentioned earlier, lack financial means. The effectiveness of the current regulatory VAT framework could therefore benefit from additional simplification measures.

IV. Privacy and Data Protection

As stated earlier, data is considered by many the raw material for their activities. Start-ups nevertheless have to take into account the legislation of 28 Member States. Even though Directive 95/46/EC harmonized the European regulatory framework, divergence remains. Data protection legislation is an ever-evolving field. As technology progresses so does our understanding of data protection. Our notion of what data protection entails is continuously challenged by the rapid advancements made in the technological field, such as machine learning and data mining. As a consequence, Member States have interpreted several key concepts differently. Without uniform interpretation start-ups are left in the dark. Moreover, the lack of guidance on how certain protection requirements should be implemented, may result in the infringement of the data subject's data protection rights.

For instance, even though Directive 95/46/EC stipulates that consent must be "free, specific and informed", Member States do not deal uniformly with the matter^{xxix}. Some laws emphasize the need for consent to be 'manifestly' free, specific and informed, by including "unambiguous" in the very definition of consent (Portugal, Spain and Sweden)^{xx}. Italian and German laws require consent to be in writing; however deviation is allowed in the online environment: consent can be given by a mouse-click.^{xxi} France, Ireland and the UK do not define "consent". However, in France, consent for the processing of data is valid if it amounts to a "freely given, specific and informed indication of the wishes" of the data subject. In the UK, implied consent seems possible for non-sensitive data. Irish law requires consent to be given explicitly, yet implied consent suffices in circumstances where the purpose for data processing can be clearly understood and is well-defined. As a result of this divergence, consent validly obtained under the law of one country, may very well be considered insufficient for

subsequent data processing activities in another country, even if that country belongs to the EU/EEA^{xxii}.

V. Territoriality of Copyright

Intellectual property rights are territorial in nature. The rights granted to a creative or industrial invention will be governed by each separate territory in which protection was sought. The territoriality of copyright may be of particular importance. For start-ups relying on third-party creative content, marketing possibilities are limited as they must take into account 28 different copyright legislations. This negatively impacts their business on 2 ways. First, a consumer buying creative content via a digital channel in his home country, is restricted from accessing that content while travelling, unless the license for that country has been secured as well. Second, a start-up wishing to provide services on a pan-European level must secure the required license in all 28 Member States, which raises transaction costs.

In addition, the majority of copyright exceptions provided for by the EU Copyright Directive were optional for Member States to implement. The resulting disparity may make the performance of certain activities, relying on these exceptions more difficult. This may be the case for text and data mining activities.

VI. Crowdfunding

At an early stage, ICT start-ups primarily require funding and capital to make their desktop ideas reality. Crowdfunding has become an increasingly popular method of capital acquisition: whereas start-ups may fail to receive funding from traditional sources, such as banks, private equity houses and angel investors, the crowd can invest directly into projects or undertakings they truly believe in.^{xxiii} The importance of crowdfunding as an alternative financing mechanism should not be underestimated: traditional sources may be reluctant to provide funds to high-risk undertakings and the supply of venture capital remains limited in Europe.^{xxiv} In addition, the crowd remains open to everyone, whereas competition in the investment market can be very high – competition is also high when start-ups try to enter into incubation programs.

Regulatory fragmentation nevertheless remains a key hurdle for crowdfunding projects within Europe. National laws allow for local crowdfunding industries to grow, yet fragmentation reduces the potential market size and leaves little room for scale^{xxv}. Because the European financial directives are interpreted differently across member states,

the emergence of a healthy European crowd fund industry is currently unlikely^{xxvi}. A pan-European position is missing as there is too little cross-border engagement between the national financial services regulators. Additionally, EU Member States legislation often differentiates among crowdfunding models (equity, lending and donations or rewards). Consequently, legal uncertainty may prevent start-ups from obtaining the necessary funds.

VII. Cryptocurrencies

By simplifying transactions and by preventing the user to enter personal payment details, end users can be motivated to use virtual money. Hence, the introduction of a virtual currency for virtual goods could generate additional revenue for young start-ups. The possibility to earn extra virtual currency could also lock in users. Moreover, virtual currencies could be an important tool within the app market and advertising industry when designing strategies to reap benefits of the virtual goods market^{xxvii}. The implementation of virtual money, and cryptocurrencies in particular, as a payment mechanism may thus provide European digital start-ups an advantageous position.^{xxviii} However, there is still considerable confusion as to what the exact legal status of cryptocurrencies is.

Countries such as Belgium, France, Cyprus, Denmark, Netherlands, Portugal, Spain and the UK have no specific legislation on cryptocurrencies, yet warnings have been made concerning the potential dangers involved with them.^{xxix} In Germany, bitcoins are considered units of value having the function of private means of payment within private trading exchanges or they are substitute currencies that are used as a means of payment in multilateral trading transactions on the basis of legal agreements of private law.^{xxx} In its current state, German authorities do not require bank supervisory licensing for the giving, acceptance or mining of bitcoins. Nevertheless, licensing could become necessary under various circumstances, including the creation or maintenance of a market in bitcoins.^{xxxi}

The prudent attitude of policymakers is understandable, as virtual currencies are still in an infancy stage. Yet, policy makers are aware of the risks these payment mechanisms entail. There may be a reluctance of start-ups to enter the market as long as they do not know if, and which, new legislation will be implemented.

IX. Harmonization Matters - The Importance of the Digital Single Market Strategy

Most of the legal areas discussed above are currently under review. Indeed, the European Commission has reaffirmed its commitments to address these issues in its 2015 Digital Single Market Strategy. The impact of regulatory measures on start-ups has been expressly recognized, which has not always been the case in the past: the recently introduced VAT regime targeted, among others, global internet giants, but did not take into account the multitude of small EU start-ups. The Digital Market Strategy has taken an important step in recognizing that, even though policy makers must keep pace with rapid innovation, start-ups and web entrepreneurs are particularly vulnerable and strongly affected by ill-adapted regulatory measures.^{xxxii}

The three pillars upon which the digital single market strategy rest – being a) better access for consumers and businesses to digital goods and services across Europe, (b) shaping the right environment for digital networks and services to flourish and c) creating a European Digital Economy and society with growth potential – sound promising for start-ups. Indeed, harmonization measures in the fields of contract law (whether B2C or B2B), copyright and data protection will likely stimulate cross-border activities. The effects on the start-up success factors, i.e. scalability, market potential and velocity, are likely to be positive. The key points of the Digital Market Strategy must now materialise and be further strengthened.

It may be of importance to note that start-up organisations, COADEC in particular, have raised concerns with regard to some of the intended goals of the Digital Market Strategy.^{xxxiii} In particular, they worry that the Commission's vision may increase regulatory burdens on online intermediaries and platforms. Nevertheless, a call concerning the role of online platforms will be launched in 2016, thus no immediate plans are apparent. COADEC has also questioned the Commission's goal to level the playing field in the telecom sector, which may hurt innovative messaging and VoIP start-ups. COADEC hopes that the intent of the Commission is to lower the burden on telecom operators rather than increasing the regulation for over-the-top service providers.

Policy Recommendations

to increase competition with the US, from which most online trades emanate.^{xxxiv}

1) The European legislator should commit further to the introduction of harmonizing measures in an effort to achieve a true digital single market and to reduce the barriers to digital innovation.

- 1) Establish a common European Sales Law for consumer and business transactions, facilitating cross-border trade through the introduction of a uniform set of contract laws, applicable in all Member States.
- 2) Provide a clear regulatory framework with regard to the operation of online platforms.
- 3) Aim towards the further harmonization of the other key legal areas for start-ups: privacy and data protection and intellectual property rights in particular.
- 4) Simplify the tax and VAT regime for digital content.
- 5) Provide clarity concerning and aim towards uniform measures relating to the regulatory framework governing alternative financing mechanisms, such as crowdfunding.

2) National legislators and courts should strive at a uniform application of the key concepts of EU legislation. A uniform interpretation of regulatory concepts or principles could be provided by EU advisory boards, such as the article 29 Working Party.

- 1) Important regulatory reforms should be accompanied with guidance documents to allow for a smoother implementation of legal requirements, but also to increase legal understanding and awareness among parties involved.

3) Legislators and regulators should engage more with start-ups during the preparatory process of new laws or regulations. Start-ups differ from 'traditional' SMEs. They should take into account start-ups' key success factors: scalability, market potential and velocity.

4) EU Member States and The European Commission should further promote digital start-ups both in access to capital and visibility

Specific policy recommendations have also been made by the iLINC network in relation to the regulatory framework governing legal clinics, taxes, copyright, the sharing economy, the principle of purpose specification and limitation in data protection, and the corporate environment.

VI. Future Trends

When regulatory reforms are planned, one should also consider the future technological environment. The impact of ICT advancements can hardly be predicted adequately. The only certainty is that technological changes will increase at a rapid pace. Even though law can guide practice, in reality technical evolution will most likely guide law. Our legal frameworks risk to be outpaced and ill-equipped to address the challenges brought forth by future technological evolution. Nevertheless, legal principles are necessary, as they benefit society as a whole. If legal principles are to stimulate innovation, whilst still preserving a sound environment in which mores are adhered, there will be an increasing need to adjust laws in time and even to pro-actively seek solutions to future legal conundrums. If the goal is to reduce the legal barriers towards innovation, it is important for legal professionals, but also for students, to be made aware of future trends that may cause legal shifts. It is still unclear how future trends will alter the legal landscape. As a consequence, it is quite difficult to pinpoint the exact impact they might have on current legal challenge areas. The following, non-exhaustive list, identifies upcoming trends that are likely to impact the legal framework in which digital start-ups operate.

I. Future of Mobility

The car industry is probably one of the most traditional industries in Europe. As the economy strives towards consumer empowerment and aims to increase personal experience, the car industry will follow. In the near future, the mobile industry will be characterized by an increasing trend towards personal or freight mobility as the preferred method of travel. Mobility will become integrated and combined with intelligent and smart technologies^{xxxv}.

The future of mobility is likely to affect our current understanding of product liability and liability in general. Considering the many interwoven actors in the development cycle of automated cars for instance, it will become hard to determine who should be held responsible when traffic incidents occur: the car manufacturer, the software developer or the owner of the car?

Connected car services bring along major privacy concerns and data protection legislation does not yet provide a clear-cut answer to some of the simpler questions. For instance, it is already quite complicated to determine who the data subject will be: the one driving the car or the registered owner of the vehicle? Given the likely co-operation between car manufacturers, software engineers

and telecom operators during the production phase of connected cars, it is equally difficult to establish data ownership.

II. Bricks and Clicks

The term 'bricks and clicks' exemplifies the new era of commercial activity. The term is a reference to the traditional 'bricks and mortar' business model. In a digital environment however, goods and services are no longer traded through the traditional retailer environment. During recent years, growth rates in mature markets have begun to slow down. Sustainability thus requires retailers to expand their borders to meet new growth targets.^{xxxvi} Up until now, expansion efforts have focused on new brick-and-mortar store openings. But by the year 2025, it is expected that bricks and clicks will become the retailing norm of the future, with every retailer having an online identity as well as a brick and mortar presence.

An increase of online commercial activities, is likely to impact consumer and contract law. The dependency on online frameworks and lack of physical buffer will surely require a coherent framework concerning digital content delivery.

III. Connectivity and Convergence

The Internet has started a verified revolution. The internet has become more and more structured, creating an interconnected ecosystem for those who have access to an internet connection. New and current technologies will unlock innovative applications influencing our communication and economy. The future is one of connectivity and convergence^{xxxvii}, and studies indicate that this trend will continue, with 5 billion Internet users and 80 Billion Connected devices worldwide by 2020.^{xxxviii} Most of these trends have already materialized. Often referred to as the Collaborative or Sharing Economy, interconnectivity has enabled a social economy whereby human and physical assets are shared worldwide through the collaboration between individuals (e.g. airBnB).

The collaborative economy enables an increased interaction between consumers. Peer-to-peer business models will become more prevalent. The 'brand', i.e. start-up, will act as the platform and will enable end-users to share physical or intangible assets among each other. However, due to the increased interaction between end-users, it will be increasingly difficult to separate 'consumer' from 'trader'. The definition of the latter determines who should apply consumer protection rules and who should ultimately be held liable for the infringement thereof. Nevertheless, as end-user interaction increases, the distinction between 'trader' and 'consumer' will become increasingly blurry.

Additional guidelines will therefore be necessary to ensure consumer safety, but also to increase transparency among users of peer-to-peer networks. The current application of consumer protection legislation does not allow an easy answer to certain questions. Should the platform operator, for instance, still be considered the trader in peer-to-peer networks, as he only acts as a facilitator among users? And if so, in what circumstances should he be held liable for non-compliance by users within the network, given the fact that within these peer-to-peer situations, the end-user may act as the immediate counterparty.

Additionally, peer-to-peer networks may enter markets governed by sectoral regulations. Uber and the taxi industry. This raises questions as to what legislation should effectively be applied and whether this regulatory inequality should be addressed by leveling the playing field.

IV. Data Mining

The global Big Data market is expected to generate a revenue of over 122 billion dollars by 2025^{xxxix}. As a result, big data analytics is one of the main emerging industries of the future. Especially in the marketing sector big data can be considered the Holy Grail, as it allows marketers to target customers precisely and efficiently. In a connected world, the precision and relevance of service delivery will most likely increase due to efficient use of location and time data. Even though the term 'Big Data' may disappear from the future lexicon, the underlying principle, i.e. the use of increased computational power and advanced data mining techniques to analyze large data sets in an effort to identify patterns and subsequently substantiate economic, social, technical and legal claims.^{xi}

Due to the increased importance of data as a driver for innovation, the data subjects must have full awareness as the purposes for which data will be collected and to whom it may be disclosed. As more and more data relating to individuals will be collected, the data subject must also have the ability to access that data in order to ascertain the accuracy and completeness thereof. Additionally, the data subject must have a right to correct that information.

Although the proposed EU Data Protection regulation intends to implement additional safeguards against Big Data abuse, the underlying principles are under continuous strain. Advanced data mining techniques exert pressure on the ex-ante data protection mechanisms, such as anonymization and the principles of purpose

specification and limitation. For instance, how can a start-up specify the purpose of his data mining activities, when the exact goal of data mining is to find new uses for data? Similarly, as data sets grow, links between data can be more easily discovered, pressuring the feasibility of true anonymity.

Even though data analytics can serve as a catalyst for value-added services, the individual's right to self-determination may be at risk. Even though most end-users are aware of the existence of targeted advertising, the exposure thereof may have an impact on our subconscious. The access to data by governments may invoke dystopian images, but brands and commercial operators may, through big data analytics, influence our behavior as well, which may lead to so called brand totalitarianism. Therefore future regulation may have to take into account psychological studies to determine the instances where big data knowledge could be applied and how this could be done without exposing us to potential risk. In other words, the regulation of profiling measures should be taken into close regard.

Even though start-ups prefer consent as the basis for their data processing activities, the notion among start-ups that consent is 'the way to go' may have to be abandoned. Indeed, it seems that the average knowledgeable individual will no longer be capable to grasp what happens with the data he is putting on the net. Should we increase the obligations of the controller, or should citizens be made more aware of their Internet habits?^{xii}

V. 3D Printing

Even though 3D printing has been around for quite some time, it has become a billion euro industry and forecasts indicate a tremendous market growth for the coming years.^{xiii} 3D printing is promising as it can be utilized in a variety of industries. Even though 3D printing is very cost-intensive, start-ups are not limited to the core printing activity to capitalize on this trend.^{xliii} Platforms can be set-up to share 3D content files. Likewise, a start-up can serve as an intermediary connecting end-users to 3D printing facilities.

Of course, 3D printing is likely to affect our understanding of intellectual property legislation. For instance, what is the most effective protection method for 3D designs? Second, the enforcement of intellectual property rights is challenged as 3D printing now allows piracy to enter the physical world.

Additional questions arise with regard to product liability. Who should be held liable for the

malfunctioning of a 3D printed object: the individual who designed the initial 3D file or the company controlling the 3D printer? Start-ups may also face intermediary liability when they act as the conduit between end-users and 3D printing hubs.

Conclusion

It is not our intention to judge how EU policy approaches should shift in light of these future trends. At least, not in a substantive manner. However, the trends described above may give some indication on how the legal environment will evolve, or even how the legal environment should evolve. At its current state, the legal rules in Europe seem incapable of dealing in a sufficient manner with the difficulties that lay ahead.

All trends highlighted above have the capacity to influence the law in many different ways. Technology also seems to affect all areas of law: financial law, e-commerce, intellectual property law and privacy and data protection... In other words, new technologies will impact the legal challenge areas that matter most to start-ups.

Even though it is too early to provide specific policy recommendations, technological advancements will necessitate regulatory measures to be taken. Before taking concrete regulatory steps, policy makers should make a detailed impact assessment. Start-ups are at the forefront of technological developments and regulatory changes are likely to affect them the most: as stated earlier, start-ups are vulnerable to ill-adopted regulatory reforms. Taking into account the necessity for start-ups to scale quickly to other markets, EU action should aim towards uniformity. In a letter to Vice-President of the European Commission for the Digital Market Andrus Ansip, 'Allied For Startups', a worldwide network of advocacy organizations with a focus on improving the policy environment for start-ups, urged caution with regard to the regulation and creation of new laws for each (new) technology in the digital environment.^{xiv} They consider that in order to foster innovative and evolving companies within Europe, it is key to avoid the imposition of strict horizontal regulation, which may apply differently to each start-up and may thus place additional burdens on entrepreneurs seeking to scale up.^{xiv} New technologies impact industries differently. Therefore, the implementation of horizontal measures may not always be desirable. This does not mean that regulation should not be imposed on new technologies: legal gray zones – which admittedly could be to the benefit of start-ups as well – should be addressed.

There is a clear role for the EU to ensure consistency in the way legal frameworks develop within Europe. Building fertile soil for innovative entrepreneurs surely requires more than laws – it also depends on the educational context, financial incentives, cultural context, social environment, etc. – but the importance of robust and coherent legal rules are not to be underestimated. By investing in the modernization of existing rules and ensuring a level playing field throughout Europe, the EU can increase legal certainty for all parties involved. When preparing legislative initiatives or reforms, the EU should be keen to have all voices – not only established actors, but also smaller entrepreneurs with limited financial means – represented in the policy debate.

Also through EU supported initiatives like the ICT law clinics, new generations of (law) students are stimulated to think pro-actively about the appropriate legal setting for a climate of dynamism and innovation in Europe. They will be better trained (and ICT start-ups better equipped) to tackle tomorrow's societal challenges.

Policy Recommendations

- 1. When technological developments necessitate the modification of the current regulatory environment, policy makers should proceed with caution. A thorough impact assessment should be conducted, taking into account those players who are at the forefront of these developments, i.e. start-ups. Start-ups are more likely to be negatively impacted by ill-adopted regulatory reforms.***
- 2. When adopting new legislation, policy makers should strive towards legal uniformity and consistency where possible.***
- 3. New technologies impact industries differently. The implementation of horizontal measures may therefore not always be desirable.***

VII. Addendum - Policy issues as identified by start-ups

During the span of the iLINC project, start-ups made sure their voices were heard. Indeed, whereas up until 2013, start-ups did not unify their thoughts on policy changes, this changes under the auspices of Neelie Kroes (at that time Vice-President for the Digital Agenda). On 2 September 2013, the European Leaders Club^{xlvi}, an independent group of founders in the field of tech entrepreneurship, presented the European Start-Up Manifesto,^{xlvii} which outlines a 5-point, 22-action plan to stimulate entrepreneurship.^{xlviii} The manifesto kick-started a number of similar national initiatives.^{xlix} These manifestos cover more than just the legal challenges; they also include economic and educational barriers. Therefore it is important to highlight the key action points these documents outline as they do provide suggestions on how to unblock digital barriers. Moreover, some of the themes covered in these documents, seem to align with iLINC research and have also been covered by the iLINC Policy Briefs.

The aim of all the start-up manifestos has been to raise awareness among policy makers concerning the various challenges start-ups face in the digital environment. The various start-up manifestos that have been published over the past 2 years share several commonalities. Although the interpretation of policy issues differs across the various manifestos, in general, **the following major themes can be discerned: 1) digital skills 2) access to talent 3) access to capital and investment, 4) the facilitation of incorporation, 5) the availability of data and 6) legal simplification.** The following section will briefly cover these themes. The latter theme (legal simplification) has already been elaborated on in this policy brief, so will not be discussed in further detail. By taking these action points into consideration, policy makers, both on the national and EU level, could further contribute to the European entrepreneurial environment.

1) Digital Skills

Start-ups require employees that are digitally skilled. The importance of digital skills and expertise has also been recognized by the European Commission in its Digital Single Market Strategy for Europe.ⁱ Another key factor in fostering digital innovation, is to ensure that teachers are confident and able to educate students concerning the digital environment. However, within the context of the start-up environment, education takes on a very specific form. Even though, education should lead students to a better understanding of the

data-driven market-place by offering courses in computer programming, education should also motivate the entrepreneurial spirit of the population. This could include the encouragement of students to start their business before graduation or to learn student or the teaching of students on how to find customers rather than a job.

2) Access to Talent

Once skills have been created in the digital single market, one has to ensure that these skills are applied in an efficient manner: skills must be utilized to their full potential. For start-ups access to skills means that the right skills should be deployed at the right moment. Although start-ups may benefit of easier hiring and firing capabilities, the iLINC network believes it is above all necessary to develop a system in which start-ups know who they hire, without there needing to be a fast 'firing' process.

In the digital environment, one must also take into account to borderless nature of the internet. Electronic communication enables parties to set-up virtual work environments. Therefore, cross-border hiring must be facilitated.

On a more fundamental level, start-ups fear a European brain drain. Although 4 European cities are currently in the top 10 global start-up hubs, start-ups often choose to migrate to Silicon Valley at a later stage.ⁱⁱ Therefore, start-ups have asked policymakers to take the necessary steps in order to ensure talent remains in the EU. This could also be established by promoting start-up activities and enable entrepreneurship as a viable business opportunity in the EU.

3) Access to Capital and Investments

Even though start-ups are active in high growth sectors, at the start-up stage, little revenue is actually generated. According to the iLINC survey, approximately half of start-ups does not have a revenue stream. Indeed, most start-ups need external funds in order to survive or develop their idea. However, according to the European Start-up manifesto, venture capital investment is declining within the EEA, having approximately halved since 2008.ⁱⁱⁱ Moreover, according to the manifesto, the aggregate decline in later stage investment is even steeper. Thus, even though access to capital is necessary, investment is currently lacking. The difficulty of raising finance within the EU has also been recognized by the European Commission in its Digital Market Strategy. Venture capital raising remains limited in Europe and lags behind the US by a factor of seven.ⁱⁱⁱⁱ Due to regulatory fragmentation the cross-border flow

of venture capital investments is difficult. As a consequence, successful ventures have

4) The Facilitation of Incorporation

Digital start-ups aim towards rapid deployment, growth and scalability. This characteristic does not easily translate into the traditional corporate mould. Additionally, start-ups must be given room to experiment: the pace at which technology develops and advances requires tremendous flexibility. Furthermore, failure is a key component of the start-up ethos. Start-ups must learn to fail. More often than not, an entrepreneur will face failure before reaching his first success.^{liv}

Due to these traits, the current corporate climate, which is still very much based upon traditional business paradigms, is not adapted to the start-up reality. Rather, a structure is needed that takes into account the necessity for start-ups to experiment as well as the high failure rate. Perhaps the requirements were most aptly and simply stated within the Spanish start-up manifesto: start-ups need a stable and effective legal framework to facilitate the creation, management and closing of companies.^{lv} Only then will the EU market be able to stimulate creativity and digital opportunities.

5) Open Data

Within the information society, data thrives innovation. Start-ups have found new ways of utilising data in order to offer better and more innovative products to their end-users.

According to European start-ups one major source of data still remains untapped: government data. The Leaders Club believes that opening up government data has the ability to boost the creation of new businesses and further stimulate the development of innovative data-driven products. At the same time, the dependence on central government can be reduced. Moreover, opening up government data has the added benefit of increasing trust and transparency in public institutions.

VIII. ILINC RECOMMENDS - SUMMARY

- Universities should be stimulated to establish legal clinics as these can (partly) mitigate the lack of legal awareness among start-ups. Legal clinics serve a twofold purpose: a) they provide start-ups a cost-friendly alternative to professional legal counselling and b) they give students a practical hands-on learning experience during their education. Moreover, figures from the ILINC survey illustrate that most start-ups are supportive of legal clinics and would likely participate in their programs
- The academic and private sector should cooperate in setting up alternative channels to reach start-ups with legal information. Legal clinics cannot fulfil all demand, and as already demonstrated, only half of start-ups seek professional legal counselling. Consequently, many start-ups are currently operating without taking adequate account of the law. Most start-ups will be unable to seek on-going professional legal advice due to budgetary reasons. Start-up toolkits, e.g. key contract templates, by law firms, or the organization of legal workshops specifically targeting start-ups, can facilitate the transfer of legal information to start-ups.
- Law firms should be stimulated in providing fixed or special deals for beginning undertakings.
- Legal actors, such as law faculties, law firms, legislators and regulators, and start-up communities should strive towards establishing a mutual understanding between the legal and technological environment.
- The European legislator should commit further to the introduction of harmonizing measures in an effort to achieve a true digital single market and reduce barriers to digital innovation.
 1. Establish a common European Sales Law for consumer and business transactions, facilitating cross-border trade through the introduction of a uniform set of contract law, applicable in all Member States.
 2. Provide a clear regulatory framework with relation to the operation of online platforms.
- 3. Aim towards the further harmonization of the other key legal areas for start-ups privacy and data protection and intellectual property rights in particular.
- 4. Simplify the tax and VAT regime for digital content.
- 5. Provide clarity concerning and aim towards uniform measures relating to the regulatory framework governing alternative financing mechanisms, such as crowdfunding.
- National legislators and courts should strive at a uniform application of the key concepts of EU legislation. A uniform interpretation of regulatory concepts or principles could be provided by EU advisory boards, such as the article 29 Working Party.
 1. Important regulatory reforms should be accompanied with guidance documents to allow for a smoother implementation of legal requirements, but also to increase legal understanding and awareness among parties involved.
- Legislators and regulators should engage more with start-ups during the preparatory process of new laws or regulations. Start-ups differ from 'traditional' SMEs. They should take into account start-ups' key success factors: scalability, market potential and velocity.
- EU Member States and the European Commission should further promote digital start-ups both in access to capital and visibility to increase competition with the US, from which most online trades emanate.
- When technological developments necessitate the modification of the current regulatory environment, policy makers should proceed with caution. A thorough impact assessment should be conducted, taking into account those players that are on the forefront of these developments, i.e. start-ups. Start-ups are more likely to be negatively impacted by ill-adopted regulatory reforms.
- When adopting new legislation, policy makers should strive towards legal uniformity and consistency where possible.

- New technologies impact industries differently. The implementation of horizontal measures may therefore not always be desirable.

ILINC is the European Network of Law Incubators. Its main objective is to facilitate the provision of free legal support to start-ups while, at the same time, offering postgraduate law students the opportunity to engage in professional practice in the fast-moving and highly exciting world of technology start-ups.

Visit us on our website:

<https://www.ilincnetwork.eu/>

Our core partners:



ⁱ Approximately 100 start-ups participated in the iLINC survey.

ⁱⁱ The HIG results were collected from approximately 100 start-ups.

ⁱⁱⁱ Ludwig Siegele, 'A Cambrian Moment' *The Economist* (18 January 2014);

<http://www.economist.com/news/special-report/21593580-cheap-and-ubiquitous-building-blocks-digital-products-and-services-have-caused>.

^{iv} Compass.co, *The Global Startup Ecosystem Ranking 2015* (The Startup Ecosystem Report Series, July 2015).

^v Ibid, p. 25.

^{vi} Ibid, p. 74.

^{vii} See inter alia: Andrew Ward, 'Society stands to be winner in the race for digital health' *Financial Times* (17 June 2015); <http://www.ft.com/cms/s/0/51e7e792-e1ca-11e4-bb7f-00144feab7de.html#axzz3m5uNitVA> and Patricia Heart, 'Banks Are Right To Be Afraid of the FinTech Boom' *Time* (8 July 2015);

<http://time.com/3949469/financial-technology-boom/>

^{viii}

^{ix} Martin Zwilling, '10 Tips For Building The Most Scalable Startup' *Forbes* (6 September 2013)

<http://www.forbes.com/sites/martinzwilling/2013/09/06/10-tips-for-building-the-most-scalable-startup/>

^x Ibid.

^{xi} WTO, *International Trade Statistics 2014* (2014);

https://www.wto.org/english/res_e/statis_e/its2014_e/its2014_e.pdf.

^{xii} X, 'EU position in world trade'

<http://ec.europa.eu/trade/policy/eu-position-in-world-trade/>

^{xiii} Council Directive (EU) 83/2011 on consumer rights, on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive

85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council [2011] L304/64.

^{xiv} http://ec.europa.eu/justice/consumer-marketing/files/model_digital_products_info_complete_en.pdf.

^{xv} Council Directive (EC) 44/1999 on certain aspects of the sale of consumer goods and associated guarantees (Consumer Sales Directive) [1999] OJ L 171

^{xvi} Council Directive (EEC) on unfair terms in consumer contracts [1993] OJ L95/29

^{xvii} Commission, 'A Digital Single Market Strategy for Europe – Analysis and Evidence' SWD (2015) 100 Final. p. 11

^{xviii} Commission, 'Proposal for a Regulation on a Common European Sales Law' COM(2011) 635 Final.

^{xix} Douwe Korff, *Comparative Study on Different Approaches to New Privacy Challenges in particular in the light of Technological Developments* (DG Justice, Freedom and Security, 20 January 2010).

^{xx} Ibid., p. 70

^{xxi} Ibid, p. 71

^{xxii} Ibid.

^{xxiii} Tax & Legal Group of the European Crowdfunding Network, *Review of Crowdfunding Regulation, 'Interpretations of existing regulation concerning crowdfunding in Europe, North America and Israel*

^{xxiv} Commission, 'A Digital Single Market Strategy for Europe – Analysis and Evidence' SWD (2015) 100 Final. p. 91.

^{xxv} Tax & Legal Group of the European Crowdfunding Network, *Review of Crowdfunding Regulation, 'Interpretations of existing regulation concerning crowdfunding in Europe, North America and Israel*, p. 7.

^{xxvi} Ibid.

^{xxvii} European Central Bank, *Virtual Currency Schemes* (October 2012), p. 18.

<http://www.ecb.europa.eu/pub/pdf/other/virtualcurrencyschemes201210en.pdf>

^{xxviii} Alex Barrera, 'A Guide to Bitcoin (Part IV): A look at European Bitcoin startups' (*Techeu*, 10 June 2014) <http://tech.eu/features/1034/bitcoin-startups-europe/>

^{xxix} The Law Library of Congress, *Regulation of Bitcoin in Selected Jurisdictions* (January 2014) <http://www.loc.gov/law/help/bitcoin-survey/regulation-of-bitcoin.pdf>

^{xxx} Ibid.

^{xxxi} Ibid.

^{xxxii} Commission, 'A Digital Single Market Strategy for Europe – Analysis and Evidence' SWD (2015) 100 Final. p. 4.

^{xxxiii} COADEC, 'Digital Single Market Package Unveiled (6 May 2015) <http://www.coadec.com/digital-single-market-package-unveiled/>

^{xxxiv} David Glance, 'Europe's Digital Single Market needs to foster tech startups and a global view' (*The Conversation*, 10 May 2015); <http://theconversation.com/europes-digital-single-market-needs-to-foster-tech-startups-and-a-global-view-41589>

^{xxxv} Frost and Sullivan, *Top Global Megatrends to 2025 and Implications to Business, Society, and Cultures* (2014)

^{xxxvi} Deloitte, *From Bricks to Clicks: Generating Global Growth through eCommerce Expansion* (2014)

^{xxxvii} Frost and Sullivan, *Top Global Megatrends to 2025 and Implications to Business, Society, and Cultures* (2014)

^{xxxviii} Ibid.

^{xxxix} Ibid.

^{xl} danah boyd & Kate Crawford (2012) CRITICAL QUESTIONS FOR BIG DATA, *Information, Communication & Society*, 15:5, 662-679; <http://dx.doi.org/10.1080/1369118X.2012.678878>

^{xli} 'Message to retain from the IAPP conference in Brussels' http://www.koan.be/_file/_upload/311faf4c484402d494d3b411c3732ae7_IAPP_Report_00900395.pdf

^{xlii} Louis Columbus, '2015 Roundup of 3D Printing Market Forecasts and Estimates' *Forbes* (31 March 2015) <http://www.forbes.com/sites/louiscolumbus/2015/03/31/2015-roundup-of-3d-printing-market-forecasts-and-estimates/>

^{xliii} Gartner, 'Gartner survey reveals that high acquisition and start-up costs are delaying investment in 3D printers' (9 December 2014) <http://www.gartner.com/newsroom/id/2940117>

^{xliiv} 'Allied for Startups' represents the start-up communities in the United Kingdom, France, Germany, Italy, Spain, Greece, Sweden, Denmark, Hungary, Portugal, The Netherlands, The Slovak Republic and Poland. <http://www.alliedforstartups.org/>

^{xliiv} Robin Wauters, '15 European startup associations unite to urge Commission to put innovators at heart of Digital Single Market strategy' (*Techeu*, 4 May 2015) <http://tech.eu/news/european-startup-associations-digital-single-market-letter/> and http://wb.stage-server.de/download/Allied_for_Startups_Letter_on_the_Digital_Single_Market_to_VP_Ansip_040515.pdf

^{xlivi} <https://ec.europa.eu/digital-agenda/node/50853>

^{xliivii} <https://ec.europa.eu/digital-agenda/en/news/manifesto-entrepreneurship-and-innovation-power-growth-eu>

^{xliiviii} A Manifesto for Entrepreneurship and Innovation to Power Growth in the EU

^{xliix} Manifestos have been launched by start-up communities in Belgium, Spain, Poland, Greece, Cyprus, Sweden and the UK. Investors have also banded together to draft a start-up manifesto.

ⁱ Commission, 'A Digital Single Market Strategy for Europe – Analysis and Evidence' SWD (2015) 100 Final.

ⁱⁱ Compass.co, *The Global Startup Ecosystem Ranking 2015* (The Startup Ecosystem Report Series, July 2015).

ⁱⁱⁱ A Manifesto for Entrepreneurship and Innovation to Power Growth in the EU

ⁱⁱⁱⁱ European Private Equity and Venture Capital Association (EVCA), *2013 European Private Equity Activity: Statistics on Fundraising, Investments & Divestments*, 2014, p. 39

^{liiv} Neil Patel, '90% of start-ups fail: here's what you need to know about the 10% *Forbes* (16 January 2015); <http://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/>

^{lv} The Spanish Start-up Manifesto <<http://www.spainstartupmanifesto.com/>>

Annex I: Overview of ILINC Legal and Technology Briefs

1. A Crowdfunding Taxonomy for Start-Ups

Crowdfunding has become an attractive means for start-ups to acquire the necessary funds for their projects. Whereas start-ups may fail to receive funding from traditional sources, such as banks, private equity houses and angel investors, the crowd can invest directly into projects or undertakings they truly believe in. Indeed, traditional sources may be reluctant to provide funds to high-risk undertakings. Moreover, the supply of venture capital remains limited in Europe. Furthermore, more and more start-ups have become active in the operation of crowdfunding platforms themselves. Whether a start-up operates a crowdfunding platform or aims to collect funds through such a network, both activities may be subject to regulation. Much depends upon the type of crowdfunding. This brief aims to provide digital start-ups with a taxonomy of crowdfunding types. The regulatory environment highly depends upon the type of crowdfunding a start-up is engaged in. For instance, some crowdfunding models may require a start-up to draft a prospectus.

2. The Regulation of Virtual and Crypto Currencies

Virtual commerce is one of the top emerging industries. Within this rising commercial environment, virtual and cryptocurrencies create new opportunities when it comes to payment transactions. These currencies facilitate user anonymity, wide transferability and high independence. By simplifying transactions and by preventing users to enter personal payment details, end users can be motivated to use virtual money. Hence, the introduction of a virtual currency for virtual goods could generate additional revenue. The possibility to earn extra virtual currency could also lock in users. Moreover, virtual currencies could be an important tool within the app market and advertising industry when designing strategies to reap benefits of the virtual goods market.² There is quite a lot of confusion however, as to what the exact regulatory framework of crypto currencies is. This legal brief aims to guide start-ups through the complex regulatory environment governing payment transactions. It will take a look at the current and future European legal environment and member state and foreign initiatives. This brief will focus on cryptocurrencies in particular.

3. Competition Law and the Start-Up Community

Competition law aims to govern efficient market participation by ensuring a level-playing-field. Although often linked to big corporations, this field of law may be of considerable importance to start-ups. On the one hand competition law can be used as a weapon against anti-competitive behaviour of established, market participants. On the other hand, start-ups themselves may be subject to competition law. This legal brief aims to guide start-ups towards a better understanding of the major concepts governing competition law.

4. Net Neutrality

Net Neutrality, the principle that all data should be treated equally on the internet, is of utmost importance to start-ups. Although the EU Connected Continent Proposal plans to introduce net neutrality on a pan-European level, its exact scope remains undetermined. As long as EU-wide legislation is absent, Member States are currently free to decide themselves on how to approach the subject. For start-ups, the position of the Member State vis-à-vis net neutrality could be a decisive factor in choosing both place of establishment and roll-out location.

5. Limited Liability of Internet Intermediaries

Within the online environment, start-ups often times fulfil an intermediary role. An important question on start-ups' minds is whether they can be subject to liability claims as a result of the conduct of their end-users. For instance, what would happen if the user of an online video platform would upload copyrighted content without consent of the copyright owner? Start-ups may not always be aware of illegal end-user activity, why then, should they be held responsible? The European legislator has introduced several limitations to the liability of intermediary service providers. This document aims to present start-ups a concise overview of the limited liability regime concerning internet intermediaries as set out by the 2000 EU E-commerce Directive. This brief also includes case reports with relation to hyperlinking services, video platforms and file-sharing services.

6. IP I – A Financing Mechanism for Start-Ups

Within the Information Society, the value of a start-up does not depend on its physical assets. On the contrary, intangible assets, such as intellectual property (IP) are crucial elements for start-ups when they wish to establish a competitive market position. In the start-up stage, the value of IP is potentially higher than any other business asset. Moreover, IP creates opportunities, both from a marketing and financing perspective. IP can generate income through licensing, the sale or commercialization of IP-protected products. Additionally, the smart and efficient use of IP can enable a start-up to increase its market share or to raise profit. Furthermore, investors are on the look-out for valuable intellectual assets. If intellectual assets enjoy legal protection, their quality is secured, which in turn minimizes the investor's risk. This legal protection is granted by Intellectual Property Rights (IPR): they provide their owner the exclusive right over the use of his creation during a limited period of time.

7. IP II – International IP Protection

Intellectual Property Rights (IPR) are governed by the principle of territoriality: the exclusive right will only grant protection for the territory in which it was obtained. Start-ups seeking protection in multiple territories will thus have to file for protection multiple times. Consequently, the transaction costs for those seeking protection can be quite high. Start-ups must therefore carefully assess where they will apply for protection. This requires a balancing act, taking into account the overall cost and market advantages related to obtaining protection. Still, start-ups can make use of several registration systems that facilitate the obtaining of IPR and lower the costs involved. This brief aims to outline these simplified registration methods.

8. Non-disclosure agreements for start-ups

Start-ups value their business idea and intellectual property. Therefore, it is indispensable that start-ups ensure the confidentiality of their business information and trade secrets. However, in order to translate the idea into a successful business and bring the product to market, start-ups will invariably need to disclose their information with investors, suppliers, consultants and even new employees. For that reason start-ups are confronted with a challenging balancing act between keeping the business idea confidential and promoting the business amongst third parties in order to grow the business. Evidently, start-ups need to restrict the amount of people they share their idea and value proposition with. If that's not feasible, start-ups should invest some time into drafting a non-disclosure agreement ('NDA') or a confidentiality agreement as it offers the possibility of protecting the information of being divulged further than anticipated. This brief highlights some of the key aspects that need to be taken into account when talking about and drafting NDAs. For instance, start-ups are highly advised to refrain from using NDAs when approaching investors

9. Data Protection I - Consumer Consent

Start-ups often consider data to be the raw material for innovation. Many start-ups process data they have collected from their end-users. In order to protect the data subject however, start-ups must have a legitimate basis to perform these processing acts. Considering the importance of consumer trust, start-ups may want to obtain consent from their end-users for these activities. Indeed, using consent as the basis for processing activities, ensures transparency towards the end-user, as he himself will have to decide whether or not he is okay with the processing activity. The purpose of this legal brief is to give an overview of the application of consent as a ground for the processing of personal data.

10. Data Protection II – Profiling under the EU Data Protection Framework

Understanding one's customers is the key of any successful business that focuses on providing personalised and targeted services. Start-ups are not an exception in this regard. Indeed, establishing customers' profiles, or in other words "profiling", may play an intrinsic role in a business plan of a new endeavour. It can even help to improve services as well as the overall performance of the company. While an easy access to increasingly sophisticated data mining systems and cheap data storage make the profiling an attractive option for business, it should be noted that this practice is subject to the EU data protection framework, consisting of the EU Data Protection Directive and the E-privacy Directive. This brief will provide guidance on the applicable legal framework for the profiling activities. ILINC recommends this brief to be read in tandem with the iLINC Legal & Technology brief concerning consumer consent.

Annex II: Overview of iLINC Policy Briefs

1. How to Start-Up a Legal Clinic: Key Considerations

This policy brief is aimed at those universities who plan to set up their own legal clinic. There is no one, 'ultimate' incubator model. Therefore and rather than providing target recommendations, universities may want to take into account the key considerations formulated within this brief.

2. Challenging the Bar:

Legal clinics serve a real market and societal purpose. Yet, setting up a clinic can be an extremely arduous task, not only from an organizational point of view. One of the key barriers relates to the questions: what constitutes legal advice and what are the implications thereof? This Policy Brief addresses these themes and hopes to convey the following messages: a) legal clinics serve an important societal and educational purpose and b) legal clinics should be allowed to perform their activities. In particular, iLINC believes that the provision of legal advice should not be monopolised by lawyers or bar associations and should remain open to alternative service providers, such as legal clinics.

3. Adapting the Corporate Climate for Start-Ups

Digital start-ups aim towards rapid deployment, growth and scalability in an ever-changing technological environment. In order to be truly efficient, corporate law should take into account this need for flexibility. The rigidity of the current legal framework is apparent on two levels: the incorporation of the start-up and the start-up's ability to hire and fire personnel. On both levels, legal flexibility may be necessary to ensure that start-ups reach their full potential.

4. Tax Regulation and the Start-Up Community

Digital start-ups have limited funds. Nevertheless, even at an early stage, taxes need to be paid. This could drain valuable resources early on. Additionally, EU digital start-ups worry about the rising compliance costs due to the newly implemented VAT regime. The introduction of tax relief could provide start-ups adequate breathing space during the first years of development and could positively affect third-party investment. Sharing best practices among Member States and benchmarking national tax laws could improve the overall efficiency of such regimes.

5. Creative Content, Copyright and Start-Ups – Facilitating Copyright Clearance

Online media start-ups active within the creative industries need to procure the license to the creative works they wish to exploit. Within the European Union, the rights clearance of creative works, such as music or audio-visual content, can be arduous however, especially for ventures who wish to operate on a pan-European level. First, the territorial nature of the exclusive right requires start-ups to take into account the copyright laws of all Member States in which they wish to exploit a creative work. Second, due to licensing agreements, which are often granted on a territorial basis, the relevant rights to a single work can be scattered among various right holders across nations. Therefore the transaction costs related to rights clearance can be quite high. In addition, territoriality can make it difficult for European media start-ups to scale up in the digital environment. As a consequence, European start-ups are at an immediate disadvantage against undertakings based in the United States, such as Netflix, which due to their immediate, large audience base, can gain enough experience and revenue before they enter the fragmented European market.

6. Regulating the Sharing Economy

The sharing economy has enormous growth potential and is a driver for innovation. Unfortunately, the current legal framework lacks clarity. Moreover, regulatory interventions of local governments usually consist of the application of existing, stringent and sometimes outdated legislation. Such intervention insufficiently takes into account the sharing economy's innovative properties. iLINC recommends policy makers to take into account the specific nature of the sharing economy before taking action.

7. Start-ups and Data Protection – Purpose Specification and Limitation

Start-ups often face the challenge of meeting two fundamental requirements provided for by European data protection law. First, the requirement to specify the purpose of their processing operations the moment personal data is collected by them ('purpose specification'); and, second, the requirement that the collected data must not be processed further in a way that is incompatible with the initially specified purpose ('purpose limitation').¹ In particular, Start-ups have difficulties specifying the purpose because they often do not know their final product or service (and sometimes have not even finished their business model) when they commence collecting data. This brief thus focuses on the criteria, which assist start-ups to comply with the two requirements as well as comply with specific regulation instruments transposing these requirements in the private sector and, simultaneously, meeting a need for openness toward innovation as well as legal certainty.*