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The Role of Legal Tech Startups in the
Digital Transformation of the German Legal Industry

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Abstract

Having been highly regulated for many decades, the legal industry is on the verge of disruption. The already ongoing digital transformation of the German legal industry is being driven by the more-for-less challenge, liberalization, and the process of digitization. The digitization is the strongest driver of the digital transformation, and is being driven itself by technology. Legal tech startups are emerging as a new kind of legal service providers that design and provide legal technologies and leverage platform business models to make legal services more efficient, transparent, affordable and accessible. Different categories of legal technology solutions, types of legal tech startups and kinds of legal tech innovation exist, which in addition to the opportunities and threats legal tech startups’ legal tech innovations introduce to the legal industry and its stakeholders have been analyzed by this study. As legal tech startups reinforce all three drivers of the digital transformation of the German legal industry, the study has found that the fundamental role of legal tech startups in the digital transformation of the German legal industry is to facilitate and accelerate the digital transformation through the creation and provision of legal tech innovations. Collectively, legal tech innovations will reshape the German legal industry fundamentally and sustainably.

Keywords: legal tech, legal technology, legal tech startups, legal tech innovation, digital transformation, legal industry, German legal industry, legal profession, legal services, law firms, corporate legal departments, legal service providers, drivers, more-for-less challenge, digitization, liberalization, regulation, multi-disciplinary partnerships, technology, disruption, innovation, disruptive innovation, sustaining innovation, automation, platforms, platform business model, marketplaces, enabler technologies, support-process solutions, substantive law solutions, artificial intelligence, decomposition, commoditization, nonconsumption, latent demand, low-end market innovation.
# Table of Contents

List of Tables ........................................................................................................................................ i
List of Figures ........................................................................................................................................ ii
List of Abbreviations ............................................................................................................................. iii
Acknowledgements ................................................................................................................................. iv

1 Introduction ........................................................................................................................................... 1

2 Methodology ......................................................................................................................................... 5
  2.1 Design ............................................................................................................................................. 5
  2.2 Data Collection Method ................................................................................................................ 6
  2.3 Data Analysis ................................................................................................................................... 7

3 Results ................................................................................................................................................. 9
  3.1 The German Legal Industry ......................................................................................................... 9
  3.2 The Digital Transformation of the German Legal Industry ....................................................... 11
    3.2.1 The More-for-less Challenge ................................................................................................ 12
    3.2.2 The Liberalization of the Legal Industry ............................................................................. 14
    3.2.3 The Digitization of the Legal Industry ................................................................................ 15
  3.3 Legal Tech Startups ......................................................................................................................... 17
    3.3.1 Technological Solution Categories of Legal Tech .............................................................. 19
    3.3.2 Types of Legal Tech Startups .............................................................................................. 21
    3.3.3 Types of Legal Tech Innovation .......................................................................................... 33
  3.4 Opportunities and Threats of Legal Tech Innovations .................................................................. 37
  3.5 The Role of Legal Tech Startups in Digital Transformation of the German Legal Industry ............................................. 44

4 Discussion .......................................................................................................................................... 46

5 Conclusion .......................................................................................................................................... 56

References .............................................................................................................................................. 59

Appendices ............................................................................................................................................ 68
List of Tables

Table 1 (Appendix A): Data Source Overview
Table 2 (Appendix B): Source Relevancy to Research Objectives
List of Figures

Figure 1: Sources of Legal Service (Susskind, 2008)
Figure 2: Legal Technology Framework (Veith et al., 2016)
Figure 3: Legal Tech Provider Market (Veith et al., 2014)
Figure 4: Legaltech in Germany (Tobschall, 2016a)
Figure 5: Legaltech in Germany (Tobschall, 2017)
Figure 6: Legal Tech Market Map (Wilson, 2016)
Figure 7: The Legal Tech Market Map (CB Insights, 2016)
Figure 8: Legal Tech Startup Landscape (Curle, 2016a)
Figure 9: Transformation of Big Law Firms’ Organizational Structure (Veith et al., 2016)
Figure 10: Transformation of Big Law Firms’ Business Model (Veith et al., 2016)
Figure 11: Business Model Changes for Small and Big Law Firms (Veith et al., 2016)
## List of Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSs</td>
<td>Alternative business structures</td>
</tr>
<tr>
<td>beA</td>
<td>besonderes elektronisches Anwaltspostfach</td>
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<td>B2B</td>
<td>Business-to-Business</td>
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<td>B2C</td>
<td>Business-to-Consumer</td>
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<td>B2L</td>
<td>Business-to-Lawyer</td>
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<tr>
<td>L2B</td>
<td>Lawyer-to-Business</td>
</tr>
<tr>
<td>L2C</td>
<td>Lawyer-to-Consumer</td>
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<tr>
<td>L2L</td>
<td>Lawyer-to-Lawyer</td>
</tr>
<tr>
<td>Legal tech</td>
<td>Legal technology</td>
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<tr>
<td>LPO</td>
<td>Legal process outsourcing</td>
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<td>MDPs</td>
<td>Multi-disciplinary partnerships</td>
</tr>
<tr>
<td>ODR</td>
<td>Online dispute resolution</td>
</tr>
<tr>
<td>RO</td>
<td>Research objectives</td>
</tr>
</tbody>
</table>
Acknowledgements

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1 Introduction

Having been strictly regulated for more than decades, the legal industry has remained almost unchanged as it has been shielded from many threats of disruption. The conservative principles, structures and dynamics of the German legal industry are very comprehensively described and analyzed by Christoph Luschin in his study “Large Law Firms in Germany” (Luschin, 2010). According to Luschin, a study of the German legal industry is especially interesting, as Germany’s economy is the largest in Europe and the fourth largest worldwide, as Germany is a global export leader and an important player of the European Union, and as it has a legal industry that matured relatively late but is changing rapidly (Luschin, 2010). In recent years, however, technology and engineers of disruptive innovations have slowly begun to unravel the legal industry’s rigid foundations and to digitally transform the industry, like many other industries before. With his many books, such as “Tomorrow’s Lawyers” (Susskind, 2013), Richard Susskind from Oxford University has pioneered the legal research by identifying this transformation early on, and by analyzing its opportunities and threats for tomorrow’s legal world on a continuous basis. In his most recent book “The Future of the Professions” (Susskind & Susskind, 2015) Richard Susskind together with his son Daniel Susskind analyze these opportunities and threats further, and also transfer their concepts build on the basis of the digital transformation of the legal industry to other industries and their respective digital transformation.

The digital transformation of the legal industry is driven by several factors, such as the digitization of legal data, workflows and processes, the growing demands made by legal clients for more efficient, transparent and affordable legal services, as well as calls for the liberalization of the legal industry. Especially, legal technology, fueling the digitization of legal services, is a field that is gaining more and more attention, also from venture capital investors that seek...
new investment opportunities other than fintech startups (Bues, 2016b). Legal technology (short: legal tech) refers to the use of technology and software to provide legal services (Lienemann, 2016). With “Disrupting Law School: How disruptive innovation will revolutionize the legal world” (Pistone & Horn, 2016) Michele Pistone and Michael Horn from the Clayton Christensen Institute for Disruptive Innovation in Boston have contributed to the research field by analyzing how these legal tech innovations may disrupt or revolutionize the legal industry. Members of the legal community that will be affected by the disruptions include law firms and lawyers, corporate legal departments, individual consumers, the legal academia, and, still to a lesser extent, the judiciary. A study conducted by the Boston Consulting Group und the Bucerius Law School in Hamburg, Germany “How Legal Technology Will Change the Business of Law” (Veith et al., 2016), and the study’s more extensive version “Trends in the legal market – disruptions, evolution or just hype?” (Veith et al., 2014), contribute to the research field by analyzing the recent developments in the field of legal technology and their effects on the business of law, specifically on the business of law firms and the academia of law in Germany.

A specific phenomenon in the discourse of legal technology is the emergence of legal tech startups that are founded with the purpose of disrupting the traditionally conservative legal industry with new legal technology and business model innovations (Goodman & Harder, 2014). In the United States and the United Kingdom, there are already numerous companies developing innovative solutions in the field of legal technology, and establishing veritable legal tech communities (Juetten, 2015). CodeX – The Stanford Center for Legal Informatics has developed an online database that captures legal tech companies worldwide, currently containing more than 650 startups, of which some originate from Germany (Vogl, 2016a). In fact, a legal tech scene has developed in Germany in recent years, with an increasing number
of legal tech startups emerging and articles and studies being published about legal tech innovations and legal tech startups (Bues, 2016b). The authors Micha-Manuel Bues (Bues, 2016b) and Dominik Tobschall (Tobschall, 2016b) are leading the efforts in documenting the emergence of Germany’s legal tech startup scene, providing overviews of the various areas legal tech startups are attempting to disrupt in Germany. In their book “Platform Revolution” (Parker, Van Alstyne, & Choudary, 2016) Geoffrey Parker, Marshall Van Alstyne, and Sangeet Paul Choudary provide enlightening explanations of the concepts of new platform business models, which many legal tech startups are already successfully leveraging. The legal tech innovations that legal tech startups are creating and providing introduce new opportunities and threats to the legal industry and its stakeholders, which are yet to be fully analyzed. The authors Clayton Christensen, Richard Susskind and Daniel Susskind, and Oliver Goodenough have already made contributions to the research field by providing theories and concepts that help classify these legal tech innovations.

However, the role that legal tech startups have in the digital transformation of the legal industry specifically in Germany, and the opportunities and threats that legal tech startups’ legal tech innovations introduce to the Germany legal industry and its stakeholders is a research topic in the research field that has not yet been sufficiently analyzed. It is necessary, therefore, to complement what we already know about the digital transformation of the German legal industry with information regarding the role of legal tech startups in this transformation. Since legal tech startups will increasingly penetrate the German legal industry, it is vital for its incumbents to anticipate and prepare for the disruption and see the opportunities and threats those startups represent. The study presented aims to close the gap within the research field by addressing these specific research objectives (RO):

1. to gain a deeper understanding of the German legal industry (RO1),
2. and of the digital transformation of the German legal industry and its drivers (RO2),
3. to analyze the legal tech startup landscape in Germany by elaborating on the different categories of technology solutions, types of legal tech startups and kinds of legal tech innovations (RO3),
4. to evaluate the opportunities and threats legal tech innovations present for the given stakeholder groups of the German legal industry (RO4),
5. and, finally, to assess the role legal tech startups have in the digital transformation of the German legal industry (RO5).

The defining research question of this study is:

“What is the role of legal tech startups in the digital transformation of the German legal industry?”

The modality of the study will be a conceptual research based study, based on literature and industry conference keynotes.
2 Methodology

2.1 Design

To fulfill the research objectives of the study and to answer the defining research question I designed a research based study. The scope of the research was set out to get an understanding of the German legal industry, its digital transformation, legal tech startups and their role in that digital transformation in the German legal industry. For that, the individual components, the overall context and interrelations between the different components were studied. The scope of the study, however, did not allow for detailed case studies or analyses of individual legal tech startups. Rather, many different legal tech startup models were analyzed on a higher level to get a better general understanding of the different types of startups and legal tech innovations that exist.

To ensure more plausible interpretations of the research, I structured my research by breaking down the research question into its core components, in line with the order of the research objectives. This provided the opportunity to analyze the components individually and subsequently with respect to each other, and finally all collectively. Firstly, the German legal industry was examined and characterized to provide an understanding of the specific research context. Secondly, the digital transformation was assessed with respect to the German legal industry, thus narrowing the research field down to the digital transformation of the German legal industry. Studying the different drivers of the digital transformation of the German legal industry during the research provided ground for assessing the role of legal tech startups in this transformation and for setting them into relation to the other drivers in the analysis. Thirdly, my research focused on inspecting legal tech startups within the context of the digital transformation of the German legal industry representing the study’s topic in the research field. By studying the different categories of technology solutions, types of legal tech startups and
kinds of legal tech innovations, my research helped me to identify the stakeholder groups of the legal industry that are being most affected by the legal tech startups’ creation and provision of legal tech innovations. Their identification during the research allowed for a clear evaluation of the opportunities and threats that legal tech innovations provide those stakeholders in the analysis. Finally, I tailored my research further to the role of legal tech startups in the digital transformation of the German legal industry, directly addressing the defining research question. This focus enabled me to scrutinize the specific role legal tech startups have in the digital transformation of the German legal industry in general and with respect to other drivers of the digital transformation.

2.2 Data Collection Method

In total, I spent two months (August and September 2016) collecting two types of data for the study: literature and industry conference keynotes. Additionally, I gained a lot of insight about the research field and specific research topic through informal talks with all types of stakeholders of the German legal industry, especially when attending the Zukunft Anwalt Kongress 2016 on the 02.-03. September 2016 in Cologne, Germany. The attendance of the conference was a defining moment for me personally, and especially for my research, as I had the chance to meet industry leaders, pioneers in the research field and representatives of all stakeholder groups in Germany. Of all data collected 73 sources were taken into closer consideration for the research and analysis of the study (see Appendix A). Of those 73 sources, 2 were industry conference keynotes from the Zukunft Anwalt Kongress 2016 by Roland Vogl, the Director of the Stanford Center for Legal Informatics – CodeX (Vogl, 2016b), and by Markus Hartung, the Director of the Bucerius Center on the Legal Profession in Hamburg (Hartung, 2016). The remaining 71 sources were different types of international and German literature. The literature was composed of nine books, five academic studies and reports, 11
industry reports, 17 journal and industry magazine articles, 28 newspaper and blog articles and one figure. The criteria for selecting the different literature sources were publishing format but also content related. Including the books of industry pioneers (Susskind, 1996) into the research was vital, as well as incorporating industry reports, figures, and journal and industry magazine articles. At the same time, including recent newspaper and blog articles into the research was of great value too, to get a better indication of the emerging and prevailing themes being discussed by the research and expert community in the German legal industry. Content wise, the literature ranged from informing about the German legal industry in general and in comparison to other countries’ legal industries; about the digital transformation of the German legal industry and its drivers; about legal technology, legal tech startups and legal tech innovations in general, internationally, and in Germany; the opportunities and threats introduced by legal tech innovations to different stakeholders of the legal community; to elaborating on the role legal tech startups have in the digital transformation of the German legal industry.

2.3 Data Analysis

To process and analyze the research data collected, I read and studied each of the 73 sources to extract all information that would help fulfil my research objectives and answer the research question. After extracting the information, I classified the content of the source extracts according to my research objectives and combined the many different pieces of content in designated research overviews for each research objective. The resulting table overview of sources relevant for each research objective (see Appendix B) indicates the multitude and overlaps of topics discussed per source, underlining the close interrelations and correlations between the research objectives. After classifying the source extracts according to research objectives, I re-examined the data of each research overview to summarize the most important
factors and to draw conclusions for each research objective. Finally, I combined and synthesized the factors and conclusions drawn from the data of each research overview, and structured the results into comprehensive sections of the results chapter of this study, each responding to a designated research objective respectively to the order outlined in the method design. Prior to the analysis, my expectations of the results were based on previous studies conducted in various areas within the research field and on information specific to the German legal industry’s digital transformation and legal tech startups’ role in it, gained through recent newspaper and blog articles and informal talks with all kinds of stakeholders of the German legal industry, especially when attending the Zukunft Anwalt Kongress 2016. The results of this study’s research are presented in the next chapter.
3 Results

3.1 The German Legal Industry

In the last five decades, the German legal industry has undergone immense growth and consequent change, with the numbers of lawyers having increased by approx. 720%, in contrast to Germany’s population that has enlarged by only 14% (Luschin, 2010). In 2015, the German legal services market had total revenues of $22.7 billion, accounting for 14.1% of the European legal services market value and 3.8% of the global legal services market, which had a value of $593.4 billion in 2015 (MarketLine, 2016e, 2016g).

The German legal system is a civil law mostly based on the principles laid out by the Basic (constitutional) Law for the Federal Republic of Germany (Grundgesetz für die Bundesrepublik Deutschland), as well as the German Civil Code (Bürgerliches Gesetzbuch), which has remained unchanged in its structural core since January 1, 1900 (Braegelmann, 2016). German legal practitioners rely heavily on legal literature as a legal source (Rechtsquelle), unlike Anglo-American practitioners following the case law system (Braegelmann, 2016). As in the United States, the German legal profession is self-regulated through the Federal Bar Association (Bundesrechtsanwaltskammer), which regulates the practice of law (Rechtsdienstleistungen) and the ownership of law firms in Germany (MarketLine, 2016g, 2016i; Veith et al., 2014). Taking Luschin’s (2010) figures from 2010 as an indication for the German legal market structure, there are approx. 200,000 licensed legal professionals in Germany. Of these, 150,000 are traditional lawyers, who are either employed by medium and large companies (ca. 25,000), by major international law firms, or who are solo-practitioners (Luschin, 2010). In fact, looking at the distribution among practicing lawyers, 55% are solo practitioners, 35% work in local partnerships, and only 10% in big law firms (Luschin, 2010). Of the remaining legal professionals, “21,000 are judges at the different levels and types of courts, 5,000 are public
prosecutors, 20,000 are civil servants, and 1,000 are legal academics” (Luschin, 2010). Law
firms in Germany can be classified into five different types: UK law firms, US law firms,
German international law firms, German domestic law firms, and multi-disciplinary
partnerships (MDPs) (Luschin, 2010). The structure of MDPs is allowed by law in Germany,
in contrast to the United States and many other countries where they are prohibited (Luschin,
2010). As MDPs, it is common, especially for small law firms, but also for some of the largest
German law firms, to employ a small number of non-lawyer professionals, e.g. tax experts or
auditors (Luschin, 2010).

Given the strong increase in the number of lawyers, law firms have not only grown in size, but
have adopted more business-like structures, and have managed to increase their real income
(Luschin, 2010). However, the fundamental business model has not changed and is still largely
based on three factors: leverage (ratio of partners to associates), information asymmetry, and
opacity (in transparency of the service creation) (Hartung, 2016). Being a credence good, legal
advice is still being handcrafted by legal professionals in partnership, who deliver (often
voluminous) formal documentation as output on a one-to-one basis, and since the mid-1970s
charge their services on an hourly-billing basis (Susskind & Susskind, 2015; Vogl, 2016a).
Clients are mostly dependent on lawyers and their legal services, as they not only lack the
license to practice law, but mostly the legal knowledge required to do so (The Practice, 2015a).
This has allowed lawyers to capitalize on the information asymmetry between them and their
clients by offering them customized solutions in a largely arcane language and an opaque
process that is mostly inaccessible to clients (Susskind & Susskind, 2015; The Practice, 2015a).
The opacity of the value creation process and the information asymmetry with respect to
assessing the quality and value of the output has allowed lawyers to charge for their input, time,
on an hourly-billing basis rather than for their output (Kuhlmann, 2016a). These conditions
have generally forced clients to rely on external quality indicators, such as reputation, educational pedigree, and even cost, when hiring legal professionals (The Practice, 2015a).

3.2 The Digital Transformation of the German Legal Industry

For a number of reasons, the legal profession has long been insulated against disruptive market forces (The Practice, 2015a). Besides the traditional legal business model and the power asymmetries, the main reason has been the regulation of the practice of law and the ownership of law firms (The Practice, 2015b). Historically, the argument for regulation has been the protection of consumers and the public, but at the same time regulation has especially protected the legal profession itself from competition from outsiders (Esteban-Ferrer & Wilkins, 2016a; The Practice, 2015b). Generally, regulation of industries favors incumbents and works against disruptive market forces and the interests of new competitors trying to unlock new sources of value (Parker et al., 2016). Exactly these characteristics make the legal services market fit the classic profile of an industry on the verge of disruption and digital transformation (Pistone & Horn, 2016; The Practice, 2015a). According to Clayton Christensen, architect of the concept of disruptive innovation, there are several causal mechanisms for disruptive change, technology being a primary driver, as are disruptive business models and processes (The Practice, 2015a). More specifically, Richard Susskind has identified three key drivers that may decisively influence the digital transformation of the legal industry: the more-for-less challenge; liberalization, understood as increasing deregulation, in particular in combination with the dissolution of the monopoly of the legal service provider sector; and the process of digitization (Hartung & Gärtner, 2016; Kuhlmann, 2016a; Susskind, 2013; Veith et al., 2016).
3.2.1 The More-for-less Challenge

While law firms have been able to steadily increase their revenues through price increases and clever use of their business model in the light of increasingly complex regulatory demands, many legal and court services have become increasingly unaffordable for many users, from individual consumers to global businesses (Susskind & Susskind, 2015). Especially in businesses, legal departments are under intense pressure to manage their costs, often being forced to cut 30% to 50% of their budgets, while the legal work to be done remains constant or is even growing (Hartung & Gärtner, 2016). At the same time, the steady global democratization of information has led to the breakdown of traditional silos of knowledge, dramatically improving the sophistication of general counsels and individual consumers and thereby reducing the information asymmetry between them and legal service providers regarding how legal services can be provided (The Practice, 2014). On the one hand, general counsels have begun to pass along the pressure to their external legal counsels, of whom they expect more high-quality services at significantly lower fees and with more transparency and accountability, resulting in the more-for-less challenge for law firms (Hartung & Gärtner, 2016; Veith et al., 2016). With more sophisticated general counsels accompanied by professional procurement specialists, who together have clear requirements, excellent knowledge of the market, and a changed commitment to value, which is now focused more on the legal output than on the input, intense negotiations over fees and clear clauses specifying components of work that clients can no longer be billed for (e.g. first-year associates’ time) are becoming commonplace (Hartung, 2015b; Hartung & Gärtner, 2016; Susskind, 2013; Veith et al., 2016). Furthermore, general counsels are demanding a more seamless collaboration between their in-house staff and external legal counsels (Veith et al., 2016). On the other hand, general counsels are slowly adopting new methods of sourcing legal services, e.g. through insourcing, to deal with the increased cost pressure and workload (Hartung & Gärtner, 2016). The real drive to
cost reduction does not seem to be changing the way traditional professionals charge for their work, but sourcing the work of professionals in new ways, thereby moving the focus from pricing differently to working differently (Susskind & Susskind, 2015).

According to Susskind, there are only two responses to the more-for-less challenge, the efficiency strategy and the collaboration strategy (Susskind, 2014a). Both responses focus on legal professionals working differently, rather than pricing differently to reduce costs. Firstly, the efficiency strategy involves decreasing the costs of legal service by decomposing formerly homogeneous legal services into different activities and sourcing those in the most efficient way (Susskind, 2014b). Adopting the most efficient combination of alternative sourcing methods, such as off-shoring, outsourcing, subcontracting, near-shoring, and computerizing of routine and repetitive, process-based or administrative work, will give rise to the efficiencies and cost reductions that are being demanded by clients (Kuhlmann, 2016a; Susskind, 2014a; The Practice, 2014). Figure 1 outlines 12 different ways of sourcing that Susskind has identified for the decomposition and multi-sourcing of legal services (Susskind, 2008).

Likely, a single player, such as a law firm or a new legal service provider, will take over all responsibility for the delivery of the completed, multi-sourced service (Kuhlmann, 2016a). This industrialization, digitization, and commoditization of legal services, will not only increase

Figure 1: Sources of Legal Service (Susskind, 2008)
efficiencies and reduce costs for law firms and legal departments, but at the same time will also be fundamental in radically increasing access to justice for those, who currently cannot afford legal services (Kuhlmann, 2016a; Susskind, 2014a). Secondly, the collaboration strategy involves clients coming together and sharing the costs of legal services (Susskind, 2014a). By embracing social networking technologies, firms can co-source in virtual groups and share the costs of legal tasks they have in common or that overlap, thereby reducing the costs for each member of the group (Susskind, 2013). New platform business models, which facilitate the exchange of goods and services through digital technology, can enable these kind of strategies by unlocking new sources of value creation and supply with their open and participative infrastructure at dramatically lower transaction costs (Parker et al., 2016).

3.2.2 The Liberalization of the Legal Industry

The practice of law and the ownership of law firms is said to be regulated to ensure clients are advised on the law by “suitably trained, knowledgeable, and experienced professionals” (Susskind, 2014b). However, many different stakeholder groups have been voicing their concern of the legal industry’s regulations and have been calling for regulatory change and liberalization (Susskind, 2014b; The Practice, 2015b). Some critics have argued that the legal profession is an unjustified monopoly that does not offer sufficient choice to the consumer by having anti-competitive working practices (Susskind, 2014b). Legal innovators maintain that if non-lawyers aided by technology can provide the same service as legal professionals, then not the consumers but the lawyers are the ones being protected by the legal profession’s regulated monopoly on the provision of legal advice (Pistone & Horn, 2016). Advocates of access to justice claim a protection of consumers cannot be given, when so many individuals are actually underserved, especially in lower-income groups (The Practice, 2015b). Corporate and business representatives point out the need for an update of legal frameworks to more closely align with
today’s business realities and requirements (The Practice, 2015b). In response, regulators have been slowly noticing the inefficiencies, imbalances and the nonconsumption within the legal industry, and are now increasingly concerned with seeking innovative changes in licensing models for the provision of legal services (Pistone & Horn, 2016).

A first move toward liberalization has been made in the UK with the Legal Services Act 2007 allowing the formation of new types of legal businesses called “alternative business structures” (ABSs) (Susskind, 2014b). ABSs can be run and owned by non-lawyers and can receive external investment, such as private equity capital (Susskind, 2014b). The German legal market has already been more strongly liberalized for a while, with the permissibility of multidisciplinary partnerships. As a result, players such as the Big Four accounting firms (Deloitte, Ernst & Young, KPMG, and PwC) have already started operating in the German legal market and are offering integrated business solutions in a broad range of legal fields, including premium and fast-growing practices such as compliance, finance, mergers and acquisitions, and employment law (Esteban-Ferrer & Wilkins, 2016a; Luschin, 2010). More, the leaner regulation in Germany also enables new legal business providers equipped with disruptive technologies to slowly make inroads to the German legal market. Given the trend within Europe and other nations toward the deregulation and liberalization of legal services to promote competition, reduce prices, and spur innovation, the emergence of new competitive alternative legal business providers of all sorts is likely to accelerate and prevail (Esteban-Ferrer & Wilkins, 2016a; MarketLine, 2016f).

3.2.3 The Digitization of the Legal Industry

The digitization of the legal industry constitutes the third and most profound driver of its digital transformation. With the volume of data to be analyzed in legal services having increased
The digitization of those data and other innovative technologies are having a transformative impact on legal workflows and legal business models (Hartung & Gärtner, 2016; Veith et al., 2016). Specifically, legal technology is the “application of computer and software supported digital technologies in legal services” and is driving the digitization (Lienemann, 2016). In fact, a variety of such new legal technologies are emerging by new legal service providers, so-called legal tech startups (Susskind & Susskind, 2015).

As law is an information-intensive industry, its digitization in combination with the decomposition of legal services provides great potential for automation of legal processes and workflows, such as the analysis and evaluation of contracts, the management of cases or back-office services (Hall, 2016; The Practice, 2015a; Veith et al., 2016). By employing legal tech, legal professionals will be able to meet clients’ more-for-less demands for greater efficiency and transparency by boosting their productivity and performing the same amount of work in less time or with fewer lawyers (Pistone & Horn, 2016). Legal tech will accelerate the current trends of unbundling and outsourcing legal services, by automating standardized but also increasingly more bespoke and complex legal tasks that until now have exclusively been done by lawyers, or enabling the outsourcing of those tasks via platforms powered by increasingly smart algorithms (Parker et al., 2016; Veith et al., 2016). Outsourcing will further be promoted by legal tech solutions that enable more effective communication and online collaboration between clients and outsourcing partners (Veith et al., 2016). Moreover, legal technology will capitalize on the opportunities presented by big data analytics, natural language processing and artificial intelligence to help legal professionals and their clients to capture valuable insights from large data sets (Veith et al., 2016).
Legal technology may leverage platform business models to connect individuals and corporate clients, legal professionals, and legal resources in an interactive ecosystem in which value can be created and exchanged on an unprecedented scale (Parker et al., 2016). By enabling market aggregation of legal service providers and legal content, platform models may increase efficiencies by reducing the search costs for businesses and individuals looking for legal services, and by reducing the traditional information asymmetries prevalent in the legal industry (Parker et al., 2016). New legal tech platform models will be able to grow to scale more rapidly and efficiently than incumbent legal companies because the traditional expensive, non-scalable gatekeepers are replaced by market signals provided automatically by the entire platform community, and transaction costs are dramatically lower (Parker et al., 2016). As a result, scenarios of lawyers working individually with firms and transacting across a platform that can supply the back office and lower-level services once provided by a law firm may soon become reality (Parker et al., 2016).

3.3 Legal Tech Startups

Given the digitization of the legal industry, its liberalization and the growing client pressure on law firms, a growing number of legal tech startups is emerging to provide legal tech solutions and innovations that make legal services more efficient, transparent, affordable and accessible. According to the online database of CodeX – The Stanford Center for Legal Informatics currently more than 650 startups are attempting to disrupt the legal industry worldwide, some of them in Germany (Vogl, 2016a). The number of venture capital funded legal tech startups in 2016 compared to 2011 increased by a factor of 10 and is steadily increasing (Dewey, 2016). Big legal tech hubs have been formed in the Silicon Valley, New York, Toronto and London, which are now being joined by additional tech-heavy clusters in places like Australia, Germany, Sweden, Finland, Estonia and Asia (Curle, 2016b). Across those legal tech hotspots, the
developments and patterns of technology and business models differ (Veith et al., 2016). Even though there is an increasingly active legal entrepreneurship scene in Germany, there are still far fewer legal tech startups and lower adoption rates among law firms and corporate legal departments than in the United States (Veith et al., 2016; Vogl, 2016a). Germany’s legal tech scene is said to be roughly 5-10 years behind the one in the United States, but with a substantial speed, new players are emerging and developing in the German legal industry almost on a weekly basis (Lienemann & Barth, 2016; Mahl, 2016). According to Dr. Micha-Manuel Bues, Managing Director of Leverton, one of the leading German legal tech startups, “the potential of startups in legal tech is enormous, as the market in Germany has hardly been developed yet” (Lienemann, 2016). Further, Bues believes that “legal tech will change the legal industry in Germany sustainably” (Bues, 2016b).

Generally, the legal tech landscape is extremely fragmented (Curle, 2016b). On the one hand, legal markets are jurisdiction-specific, making it very difficult to build scale across jurisdictional boundaries in the legal industry, which results in similar models being created by several legal tech startups adopting them to different countries and jurisdictions (Curle, 2016b). For example, most business fields that legal tech startups occupy in United States are attractive for legal tech startups in Germany, with the exception of e-discovery – due to the fundamental differences between the German civil law system and the case law system in the United States (Veith et al., 2014). On the other hand, legal tech startups cater to very different segments and customer groups of the legal industry, with some startups serving specific practice areas and others targeting specific end-user markets, such as consumers, law firms, corporate legal departments, courts, public agencies and law schools (Curle, 2016b).
Legal tech startups have the power to address significant needs and problems in latent legal markets, such as low-end legal services for consumer and small business law and legal aids work, which have traditionally been poorly served by the legal profession (Curle, 2016b). Whereas the high volume and low margins that characterize those latent markets have seemed unattractive and unprofitable to traditional incumbents, they are exactly the attributes attracting disruptive legal tech startups (Curle, 2016b). They see the turnaround potential for introducing more rigorous processes and systems that can radically overhaul the conventional ways of operating in these areas (Curle, 2016b; Susskind, 2008).

### 3.3.1 Technological Solution Categories of Legal Tech

The study “How Legal Technology Will Change the Business of Law” conducted by the Boston Consulting Group und the Bucerius Law School in Hamburg, Germany divides the legal tech landscape into three technology solution categories (see Figure 2): “enabler technologies facilitating the digitization of legal data, support-process solutions infusing new efficiencies into case-management and back-office work, and substantive law solutions supporting or replacing lawyers in executing core legal tasks in transactions and litigation cases” (Veith et al., 2016).

![Legal Technology Framework](https://example.com/legal-tech-framework.png)

**Figure 2: Legal Technology Framework (Veith et al., 2016)**
The study’s first category of the enabler technologies focuses on facilitating digitization in general, and specifically within the legal industry (Veith et al., 2016). Solutions for cloud storage and cybersecurity that are relevant in many industries are being offered by general tech providers (Veith et al., 2016). Others that concentrate on processes specific to the legal market, such as legal collaboration platforms, are being offered by designated legal tech providers (Veith et al., 2016). The category of enabler technologies is rapidly becoming imperative for law firms serving sophisticated corporate legal departments that have initiated data security audits of their external legal counsels (Veith et al., 2016).

In the study, support-process solutions make up the second category of legal technologies, which are introducing new efficiencies into law firm’s case-management and back-office activities, such as accounting, billing, finance, human resource management, customer relationship management and business development (Veith et al., 2016). These solutions are widely adopted, however, the degree of sophistication and level of integration into the daily legal practice diverge (Veith et al., 2016). Generally, legal professionals still lag behind other industries in deploying these software-based support-process solutions (Veith et al., 2016).

Thirdly, the study defines substantive law solutions as ones that “support or even replace lawyers in the execution of core legal tasks in transactions and litigation cases” (Veith et al., 2016). Several subcategories of substantive law solutions exist (Veith et al., 2016). One subgroup concentrates on online services that provide commoditized law solutions for highly standardized legal cases, mainly in consumer law (Veith et al., 2016). Another subgroup comprises basic support solutions that simplify and accelerate the performance of low-skilled legal tasks, such as the drafting of standard letters or deadline controls, or that support the automation of repetitive jobs, including simple contract drafting and contract analysis (Veith et
al., 2016). In contrast to the process of screening documents to determine which of the provisions merit a closer look, the analysis of those identified and often complex provisions is neither a low-skilled nor commoditized activity, (Veith et al., 2016). Yet another subcategory of more advanced analytics support solutions assists lawyers in more complicated types of legal work, such as performing data analytics on previous court and judge decisions to evaluate the chances of a client winning a case (Veith et al., 2016). Even though several law firms are already working with some of these substantive law solutions, their degree of adoption is still beneath the one for enabler technologies and support-process solutions (Veith et al., 2016).

3.3.2 Types of Legal Tech Startups

Legal tech startups offer a broad range of different types of technology solutions to a variety of customer groups and practice areas in the legal industry. As a result, the classification of these solutions is multi-dimensional. A first distinction between legal tech startups can be made based on country-related jurisdiction boundaries, separating the geographical operating areas of legal tech startups. Secondly, legal tech startups may be divided into Business-to-Lawyer (B2L), Business-to-Business (B2B) and Business-to-Consumer (B2C) companies, or synonymously and respectively into Lawyer-to-Lawyer (L2L), Lawyer-to-Business (L2B) or Lawyer-to-Consumer (L2C) legal tech solutions, where the first lawyer component often means legal tech startups, i.e. businesses (Tobschall, 2016b). Thirdly, the described categorization provided by the Boston Consulting Group und the Bucerius Law School study (Veith et al., 2016) offers a fundamental differentiation between the technical complexities and practical applicabilities of legal tech solutions. At the same time, legal tech startups’ solutions can be classified into more specific groups of services or applications. The services and applications within each of those groups can sometimes be associated with different types of the fundamental solution categories of the study by Veith et al. (2016). Thus, the groups are not direct subcategories of those
fundamental solution categories, but may contain services or applications of overlapping solution categories. Due to the scope of this study, a clear differentiation of the services and applications within those groups with respect to the fundamental solution categories will not be made. To provide a first overview of different possible groupings of legal tech services or applications, a selection of six non-mutually exclusive, nor exhaustively collective German and international legal tech startup landscapes have been studied (CB Insights, 2016; Curle, 2016b; Tobschall, 2016a, 2017; Veith et al., 2014; Wilson, 2016).

![Diagram](image)

Figure 3: Legal Tech Provider Market (Veith et al., 2014)
The Role of Legal Tech Startups in the Digital Transformation of the German Legal Industry

Figure 4: Legaltech in Germany (Tobschall, 2016a)

Figure 5: Legaltech in Germany (Tobschall, 2017)
The Role of Legal Tech Startups in the Digital Transformation of the German Legal Industry

Figure 6: Legal Tech Market Map (Wilson, 2016)

Figure 7: The Legal Tech Market Map (CB Insights, 2016)
This study will aim to comprehensively illustrate the most significant groups, representing the technical and practical operating areas that legal tech startups occupy so far, based on the conclusions deducted from the research. However, this study’s overview of legal tech startups and groups will not be exhaustive, but rather a selection, and it has to be stated that many alternative ways of constructing these groups exist, as illustrated by the legal tech startup landscapes.

The first group of legal tech startups to be examined provides commoditized law solutions via self-service (do-it-yourself) platforms to address nonconsumption and provide improved access to justice in the legal industry. The most prominent solutions are online legal document services that offer simple legal advice and the creation of standard legal forms to individuals, small businesses and enterprises, who have traditionally not been able to afford these services from incumbent legal service providers (Saraswat & Sahu, 2016). Forms, such as standard documents for incorporation, wills, divorce, contracts and other areas can be easily produced.
through the online services’ automated document assembly system technology, without having to hire any legal professional (Kuhlmann, 2016b; Pistone & Horn, 2016; Saraswat & Sahu, 2016). Legal tech startups, such as LegalZoom or Rocket Lawyer in the United States or smartlaw in Germany, have created whole new markets for online legal services, offering access to minimal and affordable legal protection in areas of former nonconsumption (Kuhlmann, 2016a; Pistone & Horn, 2016; Rubin, 2014). Within just 10 years LegalZoom has managed to serve over two million customers with presence across 30 states in the United States, has helped incorporate 20% of the limited liability corporations in the State of California, and while reporting $156 million in revenues in 2011 LegalZoom’s brand is claimed to be better known in the United States than that of any law firm (Kuhlmann, 2016a; Pistone & Horn, 2016; Saraswat & Sahu, 2016). An extension of online legal document services is the drafting of smart contracts for individuals or businesses in the context of conclusion of contracts, incorporations, and other legal matters through online or mobile solutions that are based on the secure, transparent and reliable blockchain or ethereum technology (Rubin, 2014; Vogl, 2016a). With varying degrees of smartness different companies have started to provide smart contract solutions, such as ShakeLaw in the United States, as well as agreement24.de, formblitz.de, janolaw.de, smartlaw.de, and synergist.io in Germany (Rubin, 2014; Tobschall, 2016b).

The second group of legal tech startups are electronic legal marketplaces, networks and multisided platforms for L2C, L2B and L2L services. These platform models allow connecting consumers directly to lawyers, and eliminating the traditional expensive, non-scalable gatekeepers, thereby decreasing transaction costs dramatically (Parker et al., 2016). Platforms may function as new online marketing and lead generation channels for legal professionals, and potentially in the future provide them lean backend infrastructures that handle administrative functions and lower-level services, driving costs down and productivity up even further and
eliminating the need for being part of traditional law firms (Mahl, 2016; Parker et al., 2016; Rubin, 2014; Vogl, 2016b). One category of platforms concentrates on different L2C advice solutions. Firstly, online listing, reputation, comparison and booking systems with different levels of integration enable customers to discover, distinguish, rate, and directly book legal services. Examples of such legal tech startups include Avvo, a listing and booking platform for lawyers in the United States, advoassist.de and terminsvertretung.de, listing and booking platforms for court appointment representatives in Germany, as well as portals specialized on discovery and rating of legal services in Germany, such as anwaltsauskunft.de, anwaltinfos.de, anwaltsuche.de, dasd.de, rechtsanwalt.net, bewertet.de, and richterscore.de (Mahl, 2016; Susskind & Susskind, 2015; Tobschall, 2016b). Secondly, legal advice and content portals offer consumers easy access to a range of simple legal services. German portals provide legal content for consumers (e.g. e-recht24.de) and people with a legal background (e.g. lto.de), and connect consumers and professionals of numerous legal practice areas through generic as well as specific question and answer solutions (e.g. 123recht.de, anwalt.de, anwalt24.de, anwaltsauskunft.de, escherhilft.de, frag-einen-anwalt.de, fragrobin.de, and justanswer.de) (Kuhlmann, 2016a; Mahl, 2016; Tobschall, 2016b). Thirdly, online marketplaces provide fixed fee legal service packages for defined consumer problems via networks of independent lawyers all over Germany (e.g. advocado.de, legalbase.de, and jurato.de) (Kuhlmann, 2016a; Lienemann & Barth, 2016; Mahl, 2016; Tobschall, 2016b). Finally, online reverse auction platforms enable consumers to submit cases and directly receive competitive bids for their cases by the legal professionals on the platform (e.g. Lvgou, Lexoo, and LawDingo) (Rubin, 2014; Saraswat & Sahu, 2016; Susskind & Susskind, 2015).
was beyond their reach, and on the other side provide young legal professionals a platform to showcase their talent and be found by more employers (Mahl, 2016). Secondly, legal databases that are more sophisticated than legal content portals offer various legal texts (buzer.de, dejure.org, and gesetze-im-internet.de), regulations (verwaltungsvorschriften-im-internet.de), case law (openjur.de, lexetius.de, and rechtsprechung-im-internet.de), as well as a combination of legal handbooks and secondary literature (beck-online.de, juris.de, and jurion.de) to legal professionals (Tobschall, 2016b). More and more of this legal data is being democratized, lowering the barriers to creating new solutions around this content, but at the same time distressing revenue streams of the traditional providers (Tobschall, 2016b). Thirdly, insourcing platforms provide contract lawyer staffing solutions to law firms and corporate legal departments that reduce costs and increase efficiency through technology, streamlined workflows, and alternative staffing models (e.g. Axiom) (Christensen, Wang, & van Bever, 2013; Parker et al., 2016; Veith et al., 2014). Finally, legal process outsourcing (LPO) platforms, catering to law firms and corporate legal departments, provide cheaper, more convenient, and more reliable services for routine tasks formerly performed more expensively by entry-level associates (e.g. perconex.de, tools4legal.com, xenionlaw.com, edicted.de, and jurato.de). (Pistone & Horn, 2016; Tobschall, 2016b). Being low-end market disruptors, LPO companies are now steadily expanding their range of activities to do increasingly sophisticated work (Pistone & Horn, 2016; The Practice, 2015a).

The third group of legal tech startups contains a large variety of high-tech tools for specific types of legal workflows, processes and tasks. The first type of high-tech tools centers around document review and e-discovery, which both have a higher significance in case law jurisdictions, such as in the United States, than in the German civil law system. Document review tools are increasingly supported by machine learning technology, thereby making the
traditional task of junior lawyers to review large amounts of documents much more efficient (e.g. Diligence Engine, Ebrevia, and Kira) (Susskind & Susskind, 2015). E-discovery tools additionally enable lawyers not only to search through large amounts of documents, but to support and manage the entire discovery lifecycle, from discovery and collection, protection, review, analysis to document preparation (e.g. Kcura, Epiq, Recoomind, Zapproved, and CS Disco) (Saraswat & Sahu, 2016). A second type of high-tech tools are intellectual property asset management tools, which automate the manual processes around protecting and managing intellectual property portfolios (e.g. Anaqua, Lecorpio, AcclaimIP, and Trademarknow) (Goodman & Harder, 2014). A third type of high-tech tools is automated document assembly that computerizes the production of legal documents, generating high-quality documents after interactive consultations with users, either legal professionals or consumers via online legal document services (e.g. ContractExpress and Exari) (Susskind & Susskind, 2015). A fourth type of high-tech tools is concerned with legal contract management, which involves the creation, review and tracking of contracts. Some tools support lawyers in structuring contracts and creating links between them (lexalgo.com, knowledgetools.de, and normfall.de) (Tobschall, 2016b). Other more advanced contract life cycle management solutions are evolving to augmented intelligence solutions by increasingly being supported by natural language processing and machine learning technology, which enables to automatically abstract contract terms to facilitate the contract review (Hartung, 2016; Wilson, 2016). In Germany, the legal tech startup Leverton has become highly prominent with its legal contract review solution that aims to revolutionize the due diligence processes of real estate transactions (Nünemann, 2016). The uniformity of real estate contracts allows the technology to generate risk assessments based on the contract clauses, creating significant time and cost savings, which can be passed along to clients, and which enable lawyers to concentrate on more complex tasks in real estate transactions (Nünemann, 2016; Tofern, 2016). A fifth type of high-tech tools focuses
on legal research analytics, a fundamental task area for legal professionals that historically has consumed countless hours of their time. Especially in the United States, new legal research analytics tools are democratizing and streamlining legal research processes, helping lawyers find the right legislation and make data-driven decisions about case strategy (e.g. CaseText, Judicata, RavelLaw, and LexMachina) (Pistone & Horn, 2016; Saraswat & Sahu, 2016; Veith et al., 2014; Vogl, 2016b). More specifically, visual law services, underpinned by quantitative analytics, visualize correlations in case law, and statistical predictive litigation analytics are overtaking expert litigators in accurately predicting the results of court decisions (Curle, 2016b; Pistone & Horn, 2016; Veith et al., 2014; Vogl, 2016b). The final group of high-tech tools revolves around legal practice management solutions, that in Germany have traditionally been provided by established software companies, such as RA Micro, Annotext, Renostar, and Lecare (rather targeting corporate legal departments), who all continuously develop their solutions further (Mahl, 2016). Except for Lecare’s software, the incumbents’ legal practice management solutions are rather dated desktop applications that offer no cloud-based or mobile solutions yet (Tobschall, 2016b). With legal practice management being at the core of law firms, many new legal high-tech tools centering around back-office processes such as billing, calendaring, and task management (e.g. ViewABill, and Busylamp.com), project management (e.g. LawPal), case management (e.g. Clio) and client management (klientus.de) have been established (Bues, 2016b; Goodman & Harder, 2014; Mahl, 2016; Tobschall, 2016b). Streamlining interactions between lawyers and their clients by providing online deal rooms and collaboration platforms will drive down legal costs and improve working relations, and at the same time combining different legal practice management solutions will enable lawyers to run their practices more efficiently and to pass those cost-savings onto clients, enhancing the former effect (Rubin, 2014; Susskind & Susskind, 2015).
The fourth group of legal tech startups contains a truly disruptive type of platform, namely online dispute resolution (ODR) platforms that can be associated with the concept of virtual courts and the idea of eliminating the need for traditional courtrooms (Susskind, 2013). ODR platforms reproduce, partially or even entirely, the process of resolving a dispute, especially the formulation of the solution, on their online platforms (Susskind, 2013). In the United States, the legal tech startup Modria provides ODR for small consumer claims, resolving 90% of 60 million annual disputes on eBay without any intervention by lawyers or judges (Pistone & Horn, 2016). Increasingly, similar online dispute resolution platforms are emerging in Germany, which seek to improve the access to justice by assisting customers to enforce their rights easily and without having to carry any financial risk (Bues, 2016b; Lienemann, 2016). Only in case of a successful enforcement of their claims, the German legal tech providers retain a provision of the amount in dispute, in any other case, there are no financial expenses for the customer, which is a value proposition that traditional legal professionals have never been able to give to their clients (Lienemann, 2016). Many of the German ODR startups automate certain subprocesses and create large scale solutions for class action cases in specific legal problem areas (Mahl, 2016). In Germany, the most prominent and contested market for ODR startups is one dealing with flight delays or other related issues (e.g. airhelp.de, compensation2go.de, euclaim.de, euflight.de, flightright.de, flug-erstattung.de, fairplane.de, getairhelp.com, and wirkaufendeinenflug.de), in which the market leader flightright.de has managed to enforce compensation claims worth more than €60 million for more than 600,000 customers for flight delays or cancellations already (Bues, 2016b; Mahl, 2016). Similar German ODR startups focus on issues with train rides (e.g. bahn-buddy.de, and zug-erstattung.de), speeding fines (e.g. geblitzt.de), legal enforcement of refunding of prepayment compensations after revocation of house mortgages (e.g. rechtohnerisiko.de), legal enforcement of reclaiming real estate credits (e.g. bankright.de), legally correct cancellation of contracts, subscriptions or memberships (e.g.
aboalarm.de, and volders.de), or on issues with due diligences of flawed Hartz-4 notices, warnings, fines, or claims for package tours (e.g. rightmart.de), or on class action law suit against Volkswagen (e.g. myright.de) (Bues, 2016b). In response to those emerging low-end market innovations, the European Commission has formulated a draft regulation on online dispute resolution (Susskind, 2013). The author Susskind predicts ODR to become the dominant way to resolve all but the most complex and high-value disputes in the long-term, due to the disruptive and socially constructive nature of ODR technology that will displace traditional litigators and potentially judges as well (Susskind, 2013).

The fifth and last group of legal tech startups analyzed by this study are legal artificial intelligence systems. The famous IBM Watson supercomputer is an artificial intelligence system capable of parsing natural language, processing large amounts of information at a high speed and providing answers paired with confidence levels (The Practice, 2015a). As part of the innovation program at NextLaw Labs, an innovation lab launched by the global law firm Dentons, students of Toronto University developed ROSS, an artificial intelligent lawyer solution, based on IBM Watson’s cognitive computer technology (Lienemann & Barth, 2016). In response to simple legal questions, ROSS will conduct a legal research for relevant legal source materials by combining the contents of legal documents from its database through advanced pattern recognition software, instead of using keyword-based searches like many legal research or document review tools do (Pistone & Horn, 2016). Moreover, ROSS can be trained by being fed more legal information and by being provided with indications about the relevance of its results (Pistone & Horn, 2016). At the same time, ROSS is able to continuously research by itself and to notify its user of new developments in given practice areas or alike, taking on the role of a research assistant (Pistone & Horn, 2016). Yet still focused on the interaction with legal professionals, ROSS could evolve to an application for consumers that
would be more efficient and affordable than most lawyers, and thus, could have the disruptive potential of ultimately replacing lawyers in many areas of legal services (Lienemann & Barth, 2016).

3.3.3 Types of Legal Tech Innovation

The many types of innovation that legal tech startups are introducing to the legal industry can be assessed with the different theories and concepts of innovation by Clayton Christensen, Richard Susskind and Daniel Susskind, and Oliver Goodenough (Goodenough, 2015; Pistone & Horn, 2016; Susskind & Susskind, 2015).

According to Clayton Christensen, the architect of the concept of disruptive innovation, there are two types of innovation, sustaining and disruptive ones. Sustaining innovations improve existing products or services to support and enhance the way a business or a market currently operates (Pistone & Horn, 2016; The Practice, 2015a). By employing technology in the legal industry, basic legal tasks may be streamlined or replaced, processes can be optimized and made more efficient, routine tasks can be automated, and large amounts of data can be processed and organized much faster with data analytics and pattern-recognition techniques, ultimately making legal services more affordable (Pistone & Horn, 2016; The Practice, 2015a). Disruptive innovations, however, move beyond that by fundamentally challenging and changing the functioning of a business by creating new markets or reshaping existing ones (Pistone & Horn, 2016; The Practice, 2015a). Examples of disruptive technologies in the legal market are the online document services or online dispute resolution platforms, which have created new markets of nonconsumers at the fringe of the legal industry (Pistone & Horn, 2016; The Practice, 2015a). These solutions may underperform today, relative to what traditional users in the legal market demand, however, new consumers of those programs value the convenience
and lower costs, and as former nonconsumers are willing to forgo some of the performance in light of not having had an alternative to these new services before at all (Pistone & Horn, 2016; Susskind, 2008). With time, disruptive innovations will grow in strength and sophistication, and while being traditionally rejected by incumbents they are poised to disrupt the entire legal industry (Pistone & Horn, 2016; Susskind, 2008).

In their recent writings (Tomorrow’s Lawyers (2013), The End of Lawyers? (2008), and The Future of Law (1996)) Richard Susskind and Daniel Susskind have relied on Clayton Christensen’s distinction between sustaining and disruptive innovations to classify transformations by technology (Susskind & Susskind, 2015). However, in their book “The Future of the Professions” (2015), Susskind and Susskind divide the transformational impact any technology may have on the legal profession into two other categories: automation and innovation (Susskind & Susskind, 2015). Whereas when speaking about automation, the authors generally agree with and mean much the same as Christensen’s definition of sustaining innovation, the authors are less comfortable with Christensen’s expression of disruptive innovation (Susskind & Susskind, 2015). While they acknowledge that innovations may be disruptive, they point out that at the same time, the same innovations may provide empowering benefits for the recipients of legal services, such as more accessible and affordable services (Susskind & Susskind, 2015). Therefore, instead of classifying these innovations as disruptive, Susskind and Susskind rather view these changes as “socially constructive [or] liberating“ innovations (Susskind & Susskind, 2015). Given this distinction in terminology, according to Susskind and Susskind, automation involves the use of technology to computerize and streamline inefficient activities, such as manual or administrative tasks (Susskind & Susskind, 2015). Traditional ways of operating are not discarded, instead, automation gives rise to efficiencies and cost-savings through the optimization of existing processes and activities.
Automation, thus, does not fundamentally challenge traditional approaches of delivering legal services, but rather complements and enhances them by leveraging technology (Susskind & Susskind, 2015). On the other hand, innovation, as described by Susskind and Susskind, provides alternative ways of making legal practical expertise available that have not been possible with traditional approaches of delivering legal services, but exclusively with the new innovative systems in question (Susskind & Susskind, 2015). For one thing, those innovations are providing consumers with better, more accessible, affordable, or convenient legal services, and are consequently threatening to displace the traditional models of professional work (Susskind & Susskind, 2015). Yet, innovations may also be less threatening and more impactful when they create new and different kinds of legal services, without threatening to replace existing professionals or traditional working practices (Susskind & Susskind, 2015). Such innovations may provide affordable access to legal advice in areas where there has formerly been unmet demand (Susskind & Susskind, 2015). Susskind and Susskind refer to this kind of innovation effect as the “realization of latent demand”, which bares many similarities to Christensen’s theory of disruptive innovations in areas of nonconsumption (Susskind & Susskind, 2015). Overall, Susskind and Susskind predict that while many areas of the legal industry are being streamlined and optimized through automation already, at the same time and especially in the long run, innovative technologies, both disruptive as well as socially constructive and liberating ones, will have a transformative impact on the legal industry (Susskind & Susskind, 2015).

According to Oliver Goodenough, the evolution of legal technologies can be divided into three stages: stage 1.0, stage 2.0 and stage 3.0 (Goodenough, 2015). In stage 1.0, technology empowers current legal professionals within their existing markets, similar to the way that Susskind and Susskind’s automation and Christensen’s sustaining innovations are predicted to
behave (Goodenough, 2015). In stage 2.0, technology replaces an increasing number of legal professionals within the existing markets, and thereby becomes disruptive. For example, e-discovery tools powered by machine learning technology will take over the tasks created by document review tools in stage 1.0, and low-end market innovations, such as automated document assembly solutions and online platforms, will either eliminate the need for businesses and consumers to consult legal professionals at all, or will provide them with easier access to more affordable legal services (Goodenough, 2015). In stage 2.0, traditional services of lawyers can still be accessed and purchased in either the traditional way or through built-in help desks of online platforms (Goodenough, 2015). Though being disruptive by replacing legal professionals in many areas, innovations of stage 2.0 will only evolve the existing legal system of natural language laws, courts and regulation, but not radically change it (Goodenough, 2015).

In contrast, legal innovations of stage 3.0 will be powered by “computational technology for communication, modeling and execution [, and will] permit a radical redesign, if not a full replacement, of the current [legal] system itself” (Goodenough, 2015). If laws were passed and enforced in computer code rather than natural language, technological parsing engines of higher sophistication than the human brain’s biological parsing engine could provide advanced legal services instead of legal professionals, at a high speed and low cost (Goodenough, 2015). Another type of stage 3.0 legal innovations threatening to replace exiting legal professionals are online dispute resolution platforms, which offer a radical alternative to the existing court systems with traditional litigators and judges (Goodenough, 2015). If stage 3.0 legal technologies and their effects are well-anticipated and proactively approached, e.g. by designing safeguards into them, a new legal system intended to create justice may be designed to enable just that (Goodenough, 2015). Overall, Goodenough’s stage 2.0 and stage 3.0 resemble Susskind and Susskind’s concept of innovation and Christensen’s theory of disruptive innovation.
In summary, while the authors’ concepts differ in terminology and in the way they divide the phases of innovation, they all paint a similar picture of the types of innovation that legal tech startups will introduce to the legal industry. The opportunities and threats presented by those legal tech innovations for the legal industry and its stakeholders will be analyzed further in the next section.

3.4 Opportunities and Threats of Legal Tech Innovations

Legal tech innovations will present numerous opportunities and threats for the legal industry and its stakeholders. Due to the limited scope of this study, mainly those for individual consumers, corporate legal departments (of small and large businesses), and especially for law firms (small and big) will be analyzed. Nonetheless, it must be bared in mind, as indicated in the previous sections already, that legal tech innovations will also affect other entities of the “traditional legal services value network [, such as law schools, prosecutors,] public defenders, court systems, and other local, state, national, and international bodies that regulate legal industries and administer justice”, as well as incumbent legal software providers, and service providers to the legal industry in areas, such as office supplies and legal literature (Pistone & Horn, 2016).

Firstly, as already described extensively in section 3.3, legal tech innovations will increase the access to justice for individual consumers, by providing them with more accessible, affordable and convenient legal services, many of which some consumers formerly could not afford, given the traditional legal service offerings. Online legal document services or dispute resolution platforms will provide such disruptive solutions that address this widely prevailing nonconsumption and latent demand in the German legal industry. Moreover, legal tech innovations will improve the existing information asymmetry between legal service providers
and individual consumers, and will make the value creation of legal services more transparent and comprehensible for consumers. Due to the largely existing latent demand, the ease of accessing the solutions, and the directly visible improvements in access to justice, individual consumers are leading the adoption of legal tech solutions (Veith et al., 2016).

Secondly, legal tech innovations will provide corporate legal departments with solutions to various of their resource constraints by offering opportunities for optimization, efficiency creation and cost reduction. Corporate legal departments will be able to standardize tasks, improve their quality and increase the delivery speed, and consequently reduce costs, by introducing legal tech solutions to their existing processes and workflows (Veith et al., 2014). Whether by using legal tech tools themselves or by sourcing services from legal tech startups, such as legal process outsourcing or insourcing platforms, the main goal for corporate legal departments will be to reach cost savings (Veith et al., 2014). In addition, legal process outsourcing or insourcing solutions may improve the scalability and flexibility of corporate legal departments by bridging short-term resource bottlenecks with their services, and by enabling in-house lawyers to devote their time to more strategic and higher value tasks (Veith et al., 2014). Furthermore, legal analytics solutions can provide corporate legal departments with transparency of the costs associated with legal activities, and with more sophisticated selection tools for sourcing external legal services (Veith et al., 2014). Corporate legal departments are likely to adopt legal tech solutions rather quickly, as they provide them with a large variety of visibly impactful solutions to the problems that corporate legal departments are facing.

Thirdly, legal tech innovations present numerous opportunities and threats for law firms. On the one hand, legal tech startups, such as legal process outsourcing or online legal document

Master Thesis - Zoë Andreae
services platforms, will claim a share of standardized legal services, presenting a direct threat to big law firms in the lower value segments (Veith et al., 2016). At the same time big law firms will be confronted with increased competition from boutique law firms, the Big Four and legal high-tech solutions growing their share in bespoke legal areas, where according to partners of big law firms 30% to 50% of the tasks may be automated through legal tech tools (Veith et al., 2016). Small law firms, providing standard legal services with slim profit margins, will face great threats of being displaced by legal tech innovations that automate and replace manual and inefficient activities, such as the ones making up the core of their business (Veith et al., 2016). On the other hand, legal tech innovations, such as legal research analytics tools or contract lawyer platforms, may assist big law firms in achieving cost efficiencies, enhanced decision-making effectiveness, and a more scalable, flexible and adjustable workforce that are increasingly required to satisfy clients’ demands and to prevent being replaced, partially or entirely, by new types of competitors (Dewey, 2016; Veith et al., 2016). However, the adoption of legal tech solutions by law firms has not reached its full potential yet. As long as the traditional business model of law firms prevails and is based on leverage, hourly-billing, and profit-sharing agreements, there are little incentives for law firm partners to invest in any type of legal technology (Veith et al., 2016). In addition, many legal professionals in Germany are still in a digital identification process, arguing about the reception duty of the ‘special electronic lawyer inbox’ (besonderes elektronisches Anwaltspostfach (beA)) that has just recently been introduced by the German Federal Bar Association (Lienemann, 2016). Still, there is a number of law firms that have started to adopt legal technology solutions. According to the study of the Boston Consulting Group and the Bucerius Law School (Veith et al., 2016), the adoption of legal tech innovations among law firms in Germany varies with firm size and type of legal services provided. Big law firms, employing more than 100 legal professionals and providing nonstandard, bespoke legal services, are said to adopt legal tech solutions faster than small law
firms, employing fewer than 10 legal generalists and providing standardized legal services (Veith et al., 2016). Few, highly innovative law firms have even started to design their own legal tech solutions, to set up legal tech incubators, or to invest in legal-tech start-ups (Veith et al., 2016). Generally, the majority of law firms that are already adopting legal tech solutions in any kind of capacity are doing so in response to the growing more-for-less pressures from corporate legal departments, which are increasingly willing to bypass law firms and use legal-tech solutions directly (Veith et al., 2016).

Furthermore, the overall still low adoption of legal tech solutions by law firms can be explained by the typical behavior for incumbents in industries that are being disrupted. Especially incumbents in regulated markets, such as law firms (i.e. legal professionals) in the legal industry, are poised to not take disruptive entrants and their novel approaches serious at first, rejecting the lower quality and slimmer profit margins of services that typical low-end market disruptions provide in the beginning, and dangerously believing that regulations will protect them from the disruptions in the long run (Pistone & Horn, 2016; Susskind, 2008; The Practice, 2015a). As a result, incumbents will easily and inconsiderately cede the low-end market to disruptors, and, if at all, will only invest in a range of sustaining technologies that support and enhance their traditional business model, rather than investing in disruptive innovations themselves (Pistone & Horn, 2016; Susskind, 2008; The Practice, 2015a). Other industries, however, illustrate that even formerly heavily regulated industries can be subject to disruption and consequent regulatory change, once disruptors have accumulated a sufficient number of customers after having started innovating in areas circumventing regulators or at the periphery of the industry, where they were difficult to detect (Pistone & Horn, 2016).
On these grounds, no law firm can longer afford to ignore the opportunities and especially the threats that legal tech innovations provide them with. In order to remain competitive and profitable, law firms have to “reconcile core parts of their business model to capture the opportunities presented by legal technologies” (Veith et al., 2016). Specifically, two components of their business model need to be reevaluated, in distinct ways for small and big law firms: “their value proposition (including their service offerings and revenue model) and their operating model (including their cost structure and organizational structure)” (Veith et al., 2016). Some big law firms have already made changes to their organizational structure, transforming the traditional hierarchical pyramid into a rocket with fewer general support staff members, junior lawyers, and generalists, and more legal technicians and project managers (see Figure 9) (Kuhlmann, 2016a; Lienemann & Barth, 2016; Pistone & Horn, 2016; Veith et al., 2016).

![Figure 9: Transformation of Big Law Firms’ Organizational Structure (Veith et al., 2016)](image)

Reimagining their value proposition, big law firms could not only offer legal services as such, but also assume the role of “outsourcing managers” (Veith et al., 2016), outsourcing standard
legal work to external legal service providers and concentrating on the bespoke components of legal cases themselves (Hall, 2016). Moreover, big law firms could position themselves as “master legal-tech vendors” (Veith et al., 2016), orchestrating the outsourcing of client’s standard legal work to outsourcing partners and establishing sophisticated partnerships to handle complex and bespoke work, thereby retaining the control of and improving the relationships with their mandates (Hall, 2016). Figure 10 provides an overview of other changes big law firms can undertake to transform the different components of their business model (Veith et al., 2016).

![Figure 10: Transformation of Big Law Firms’ Business Model (Veith et al., 2016)](source: BCG analysis)

Small law firms could tweak their value proposition into specializing their legal services in certain legal practice areas or reducing them to a limited number of case types that they offer at fixed prices (Veith et al., 2016). The specialization could enable small law firms to scale and streamline their services, and thereby achieve cost-saving efficiencies that will sustain their business (Veith et al., 2016). At the same time, employing enabler technologies or legal high-tech tools to support the specialization can enable small law firms on the one hand to reduce their IT infrastructure capital expenditures, and on the other hand to manage higher workloads.
cost-efficiently without having to increase their workforce proportionately (Veith et al., 2016). Figure 11 illustrates the direction of business model changes that small and big law firms are likely required to undergo in order to capture the opportunities and resist the threats introduced by legal tech innovations.

![Figure 11: Business Model Changes for Small and Big Law Firms (Veith et al., 2016)](image)

Finally, evaluating the opportunities and threats legal tech innovations will introduce to the legal industry and its stakeholders, it seems that individual consumers, corporate legal departments, as well as open-minded big law firms and boutiques will be able to capture and leverage the opportunities presented by legal tech innovations most successfully, whereas small, generalist legal practices are likely to face a serious risk of being disrupted and edged out of the market by legal tech startups or technology leveraging law firms (Veith et al., 2016). Moreover, it is likely that in the long term the relative size and importance of the world’s great law firms will shrink, a consolidation in the top tiers will occur and winner-take-all markets emerge, as much of the work they used to do migrates to platforms that can provide comparable services at a fraction of the cost and with far greater convenience (Christensen et al., 2013; Parker et al., 2016).
3.5 The Role of Legal Tech Startups in Digital Transformation of the German Legal Industry

Building on the analysis provided in the previous sections, an assessment of the role of legal tech startups in the digital transformation of the German legal industry can be made. The digital transformation of the German legal industry is mainly being driven by three factors: the more-for-less challenge, liberalization, and the process of digitization. The digitization is the strongest driver of the digital transformation, not only because it transforms analog processes into digital ones and thus enables the digital transformation per definition, but also because the digitization will have the most far-reaching impact on the German legal industry and will reinforce the other drivers of the digital transformation at the same time. As the digitization is driven by technology, and as legal tech startups design and provide legal tech innovations, the digitization will be accelerated by legal tech startups’ provision of legal tech innovations that enable the digitization of more and more areas of the German legal industry. As the digitization of the German legal industry advances, the other two drivers of the digital transformation, the more-for-less challenge and the liberalization, will be affected. Legal tech innovations will be able to meet the more-for-less challenge by facilitating and accelerating the decomposition of legal services, and at the same time will facilitate and accelerate the liberalization of legal services, both, through innovative legal tech solutions, such as platform models or legal high-tech tools. Legal tech startups that create and offer these legal tech innovations therefore affect and reinforce all three drivers of the digital transformation of the German legal industry. By reinforcing the drivers of the digital transformation, legal tech startups accelerate the digital transformation of the German legal industry. Thus, the ultimate drivers are legal tech startups that create and provide legal technology innovations, which drive and accelerate the digitization, which again reinforces the other drivers, and which all together drive and accelerate the digital transformation of the German legal industry. As such, the fundamental
role of legal tech startups in the digital transformation of the German legal industry is to facilitate and accelerate the digital transformation through the creation and provision of legal tech innovations.

On a more concrete level, legal tech startups also have the role of promoting the digital transformation of the German legal industry, by gaining a lot of press and media attention due to their disruptive character, raising awareness of the opportunities and threats that legal tech innovations can provide to the legal industry and its stakeholders, and driving adoption of legal tech innovations in response. Moreover, legal tech startups can take on the role of saviors or threatening enemies for different stakeholders of the legal industry at the same time. By facilitating the decomposition, decreasing costs, increasing transparency, or making processes of legal services in existing markets more efficient, accessible and affordable legal tech startups’ legal tech innovations do not only benefit all stakeholders equally, but also threaten traditional core business areas of others. By creating whole new markets for online legal services, in ways that formerly have not been possible without the new innovative systems in question, such as disruptive platform models, and by offering access to minimal and affordable legal protection in areas of former nonconsumption, legal tech startups facilitate the liberalization of legal services and improve the access to justice, but may also displace traditional roles and business models of professional work at the same time. Collectively, legal tech startups’ legal tech innovations will reshape the German legal industry fundamentally and sustainably.
4 Discussion

The previous chapter has analyzed the German legal industry, its digital transformation, legal tech startups, and the opportunities and threats presented by legal tech innovations in a subsequent way, to finally assess the role legal tech startups have in the digital transformation of the German legal industry. To discuss the results of this study’s research, the results of each section will be summarized, and their relevance and expectancy with respect to the study’s research objectives and research question will be evaluated.

Firstly, the German legal industry is mainly characterized by its incumbent law firms employing traditional legal business models that have not changed since many decades, largely benefiting from the existing leverage, information asymmetry, opacity, and hourly-billing model. What is striking about the German legal industry, and other legal industries alike, is that the regulation of the practice of law and the ownership of law firms has safeguarded the traditional legal business model and the power asymmetries for many decades, protecting the legal profession from disruptive market forces. Furthermore, Germany’s permissibility of multi-disciplinary partnerships, which are prohibited in the United States and many other countries, makes the German legal industry more liberalized and at the same time more prone to enable disruptive market entries than many other legal industries. Overall, the results of this section have provided a deeper understanding of the German legal industry, fulfilling the first research objective, and have been in line with expectations.

Secondly, having been highly regulated for many decades, the legal industry fits the classic profile of an industry on the verge of disruption. The digital transformation of the German legal industry has already begun, and is mainly driven by the more-for-less challenge, liberalization, and the process of digitization. First, the more-for-less challenge has arisen as legal departments
are under pressure to manage their costs, and are increasingly demanding their external legal
counsels to provide more high-quality services at significantly lower fees and with more
transparency and accountability. In addition, external legal counsels have begun to slowly adopt
new methods of sourcing legal services, as the real drive to cost reduction does not seem to be
changing how legal work is charged, but rather sourcing legal services in new ways. The
efficiency strategy, involving the decomposition of legal services into different activities and
the sourcing of those in the most efficient way to reduce costs, and the collaboration strategy,
involving clients coming together and sharing the costs of legal services, provide sound
responses to the more-for-less challenge. Second, calls for regulatory change and liberalization
of the German legal industry to promote competition, reduce prices, and spur innovation have
been increasing, as critics accuse the legal industry of being an unjustified monopoly that does
not offer sufficient choice or access to justice to consumers by having anti-competitive working
practices. In Germany, the permissibility of multi-disciplinary partnerships has enabled new
legal business providers equipped with disruptive technologies to slowly make inroads to the
German legal market. Third, the digitization of the German legal industry, being the most
profound driver of the digital transformation, has a transformative impact on the way legal
services can be provided. Legal technologies are driving the digitization, and provide great
opportunities for facilitating the decomposition and automation of legal services, for meeting
more-for-less demands for greater efficiency and transparency, and for accelerating the trend
of outsourcing legal services by leveraging platform business models that facilitate the
interactions between different stakeholders. In total, the results of this section have provided a
deeper understanding of the digital transformation of the German legal industry and its drivers,
fulfilling the second research objective, and have been in line with expectations as well.
Thirdly, legal tech startups are emerging as a new kind of legal service providers that create and offer legal tech innovations to make legal services more efficient, transparent, affordable and accessible. In the United States, a veritable legal tech ecosystem has already established, whereas in Germany the legal tech scene has just recently emerged, but has taken up pace ever since. Generally, the legal tech landscape is extremely fragmented with legal tech startups catering to different geographies and jurisdictions, different practice and operating areas, as well as different end-user markets (L2C, L2B and L2L). Some legal tech startups even have the power to address significant needs and problems in latent legal markets that have traditionally been poorly served by the legal profession, and to overhaul the conventional ways of operating in these areas. More specifically, legal tech can be divided into three technology solution categories: enabler technologies, facilitating the digitization of legal data, support-process solutions, infusing new efficiencies into case-management and back-office work, and substantive law solutions, supporting or replacing lawyers in executing core legal tasks in transactions and litigation cases. Moreover, legal tech startups creating and providing these legal technologies can be grouped according to the type of service or application they offer. The first group of legal tech startups provides commoditized law solutions via self-service platforms to address nonconsumption and provide improved access to justice in the legal industry, e.g. online legal document services and drafting of smart contracts. The second group of legal tech startups are electronic legal marketplaces, networks and multisided platforms for L2C, L2B and L2L services, which allow connecting consumers directly to lawyers, and eliminating the traditional expensive, non-scalable gatekeepers. Examples of L2C solutions are online listing, reputation, comparison and booking systems, legal advice and content portals, online marketplaces providing fixed fee legal service packages for defined consumer problems, and online reverse auction platforms. Examples of L2B and L2L solutions are recruiting platforms, legal databases, insourcing platforms providing contract lawyer staffing solutions,
and legal process outsourcing platforms. The third group of legal tech startups contains a large variety of high-tech tools for specific types of legal workflows, processes and tasks, such as document review and e-discovery tools (higher significance in case law jurisdictions than in the German civil law system), intellectual property asset management tools, automated document assembly systems, legal contract management solutions, augmented intelligence solutions, legal research analytics tools, as well as legal practice management solutions. The fourth group of legal tech startups comprises a disruptive type of platform, online dispute resolution platforms, which forcefully reduce the need for traditional courtrooms by reproducing the process of resolving a dispute, especially the formulation of the solution, on their online platforms, thereby improving access to justice by assisting customers to enforce their rights easily and without having to carry any financial risk. The fifth and last group of legal tech startups are legal artificial intelligence systems, such as ROSS, an artificial intelligent lawyer solution based on IBM Watson’s cognitive computer technology. The legal technologies provided by legal tech startups can be classified into different categories of innovation, according to the theories and concepts of the authors Clayton Christensen, Richard Susskind and Daniel Susskind, and Oliver Goodenough. Clayton Christensen differentiates between two types of innovation: sustaining innovations, which improve existing products or services to support and enhance the way a business or a market currently operates, and disruptive innovations, which move beyond that by fundamentally challenging and changing the functioning of a business by creating new markets or reshaping existing ones. Richard Susskind and Daniel Susskind divide legal technologies into two similar categories: automation, involving the use of technology to optimize existing processes and activities to gives rise to efficiencies and cost-savings, and innovation, providing affordable access to legal advice in areas where there has formerly been unmet demand through alternative ways that have not been possible with traditional approaches of delivering legal services, but exclusively
with the new innovative systems in question. Oliver Goodenough, divides the evolution of legal technologies into three stages: stage 1.0, in which technology empowers current legal professionals within their existing markets, stage 2.0, in which technology replaces an increasing number of legal professionals within the existing markets, and thereby becomes disruptive, and stage 3.0, in which legal innovations will be powered by computational technology for communication, modeling and execution, permitting a radical redesign, if not a full replacement, of the current legal system itself. The theories and concepts of the authors may differ in terminology and in the way they divide the phases of innovation, however, Goodenough’s stage 1.0 is similar to Susskind and Susskind’s theory of automation and Christensen’s concept of sustaining innovations, and Goodenough’s stage 2.0 and stage 3.0 resemble Susskind and Susskind’s concept of innovation and Christensen’s theory of disruptive innovation. Collectively, the author’s paint a similar picture of the types of innovation that legal tech startups will introduce to the legal industry. As a whole, the results of this section have provided an analysis of the legal tech startup landscape in Germany by elaborating on the different categories of technology solutions, types of legal tech startups and kinds of legal tech innovations, fulfilling the third research objective. The results of this section have been in line with expectations, with disruptive legal tech platform business models standing out, which challenge and reshape existing market structures and conventions.

Fourthly, legal tech innovations will present numerous opportunities and threats for the legal industry and its stakeholders, especially for individual consumers, corporate legal departments, and law firms. First, legal tech innovations will increase the access to justice for individual consumers, by providing them with more accessible, affordable and convenient legal services, many of which some consumers formerly could not afford, given the traditional legal service offerings. Second, legal tech innovations will provide corporate legal departments with
solutions to various of their resource constraints by offering opportunities for optimization, efficiency creation, cost reduction, scalability, flexibility, and transparency. Third, legal tech innovations will provide numerous opportunities and threats to law firms. On the one hand, legal tech innovations will present threats to big law firms in the lower value segments, but also competition from boutique law firms, the Big Four and legal high-tech solutions will threaten big law firms in bespoke legal areas. Small law firms will face great threats of being displaced by legal tech innovations that automate and replace activities that make up the core of their business. On the other hand, legal tech innovations may assist law firms in achieving cost efficiencies, enhanced decision-making effectiveness, and a more scalable, flexible and adjustable workforce that are increasingly required to satisfy clients’ demands and to prevent being replaced, partially or entirely, by new types of competitors. Whereas the adoption of legal tech solutions by law firms has not reached its full potential yet, big law firms are said to adopt legal tech solutions faster than small law firms, mainly doing so in response to the growing more-for-less pressures from corporate legal departments. Typically, incumbents of the legal industry will not take disruptive entrants and their legal tech innovations serious at first, believing that regulations will protect them from the disruptions in the long run, and will thereby cede the low-end market to disruptors. However, as even heavily regulated industries can be subject to disruption and consequent regulatory change, no law firm can longer afford to ignore the opportunities and especially the threats that legal tech innovations provide them with. Therefore, law firms have to reevaluate the core parts of their business model, the value proposition and the operating model, to capture the opportunities presented by legal technologies. Big law firms may transform their organizational structure from the traditional hierarchical pyramid into a rocket, and reimagine their value proposition by not only offering legal services as such, but also assume the role of outsourcing managers or master legal-tech vendors. Small law firms may specialize their legal services in certain legal practice areas or
reduce them to a limited number of case types offered at fixed prices, and may employ enabler technologies or legal high-tech tools to support the specialization. Altogether, it seems that individual consumers, corporate legal departments, as well as open-minded big law firms and boutiques will be able to capture and leverage the opportunities presented by legal tech innovations most successfully, whereas, small, generalist legal practices are likely to face serious threats of being disrupted and edged out of the market by legal tech startups or legal tech innovation leveraging law firms. In sum, the results of this section have provided an evaluation of the opportunities and threats of legal tech innovations for the given stakeholders of the German legal industry, fulfilling the fourth research objective and being in line with expectations.

Fifthly, on a more abstract level the fundamental role of legal tech startups in the digital transformation of the German legal industry is to facilitate and accelerate the digital transformation through the creation and provision of legal tech innovations. Further, legal tech startups reinforce all three drivers of the digital transformation of the German legal industry. More concretely, the role of legal tech startups in the digital transformation of the German legal industry is to promote the digital transformation of the German legal industry to the stakeholders of the legal industry, and to drive the adoption of legal tech innovations. Legal tech startups thereby take on the role of saviors or threatening enemies for different stakeholders of the legal industry at the same time. In summary, the results of this section have provided an assessment of the role legal tech startups have in the digital transformation of the German legal industry, fulfilling the fifth research objective and providing an answer to the defining the research question, in line with expectations.
Overall, the results of this study’s research have satisfied all research objectives and have provided an answer to the research question. The principles and drivers behind the digital transformation of the German legal industry, the different kinds of legal tech startups, the opportunities and threats presented by legal tech startups’ legal tech innovations, as well as the fundamental role of legal tech startups in the digital transformation of the German legal industry can now be clearly understood through the analysis and evaluations provided by the results of this study’s research.

Twelve generalizations can be inferred from the results of this study’s research. First, Germany’s permissibility of multi-disciplinary partnerships makes the German legal industry more liberalized and at the same time more prone to new legal business providers equipped with disruptive technologies entering the market, compared to other legal industries. Second, after having been highly regulated for many decades, the legal industry is on the verge of disruption. Third, the digital transformation of the German legal industry is being driven by the more-for-less challenge, liberalization, and the process of digitization. Fourth, legal tech startups are emerging as a new kind of legal service providers that create and offer legal tech innovations, which drive the digitization. Fifth, legal tech startups make legal services more efficient, transparent, affordable and accessible in different geographies and jurisdictions, different practice and operating areas, as well as different end-user markets. Sixth, legal technologies can be categorized into enabler technologies, support-process solutions, and substantive law solutions. Seventh, legal tech startups may provide commoditized law solutions via self-service platforms, electronic legal marketplaces, networks and multisided platforms, high-tech tools for specific types of legal services, disruptive platforms, and legal artificial intelligence systems. Eighth, legal technologies can be classified into comparable categories of innovation with the theories and concepts of the authors Clayton Christensen, Richard Susskind.
and Daniel Susskind, and Oliver Goodenough. Ninth, legal tech innovations will present numerous opportunities, mainly for individual consumers, corporate legal departments, and open-minded big law firms and boutiques, and severe threats, mainly for small, generalist legal practices. Tenth, the fundamental role of legal tech startups in the digital transformation of the German legal industry is to facilitate and accelerate the digital transformation through the creation and provision of legal tech innovations. Eleventh, legal tech startups reinforce all three drivers of the digital transformation of the German legal industry. Twelfth, collectively, legal tech startups’ legal tech innovations will reshape the German legal industry fundamentally and sustainably.

The results are in line with expectations, and were mainly based on previous studies that have been fundamentally taken into consideration for this study. The most fundamental previous studies, covering different areas of the research field, for the research of this study were Richard Susskind’s “Tomorrow’s Lawyers” (Susskind, 2013), Richard Susskind and Daniel Susskind’s “The Future of the Professions” (Susskind & Susskind, 2015), Christoph Luschin’s “Large Law Firms in Germany” (Luschin, 2010), Michele Pistone and Michael Horn’s (Pistone & Horn, 2016) “Disrupting Law School: How disruptive innovation will revolutionize the legal world”, the Boston Consulting Group und the Bucerius Law School’s “How Legal Technology Will Change the Business of Law” (Veith et al., 2016) and “Trends in the legal market – disruptions, evolution or just hype?” (Veith et al., 2014), as well as Geoffrey Parker, Marshall Van Alstyne, and Sangeet Paul Choudary’s “Platform Revolution” (Parker et al., 2016). However, this study’s results extend beyond the ones of each individual previous study, as the study not only combines their theories, insights and results in a new way, but also enriches them by new results specific to the German legal industry’s digital transformation and legal tech startups’ role in that, and synthesizes all results. Thus, the expectations were not only based on these previous
studies, but also on information specific to the German legal industry’s digital transformation and legal tech startups’ role in it, gained through recent newspaper and blog articles, such as the ones by Bues and Tobschall, and informal talks with all types of stakeholders of the German legal industry, especially when attending the Zukunft Anwalt Kongress 2016. As the expectations were based on the data sources taken into consideration for the analysis, it seems the results could not have been very unexpected per se, also given the modality of a research based study. However, only the analysis, combination and synthesis of the different data sources have enabled to reach the results of this study’s research, and could have therefore provided unexpected or conflicting results during the process that would not have been in line with expectations.
5 Conclusion

After all, this study has arrived at the conclusion that the digital transformation of the German legal industry is being facilitated and accelerated through the provision of legal tech innovations by legal tech startups. Having been summarized in the discussion already, the results obtained from the study’s research include the German legal industry’s potential for disruption, the drivers of the digital transformation of the German legal industry, the distinction of legal technology solution categories and of different types of legal tech startups and legal tech innovations, the evaluation of the opportunities and threats of legal tech innovations, and the assessment of the role of legal tech startups in the digital transformation of the German legal industry. Those results generated for the research topic are state of the art and in line with previous studies conducted in various areas of in this research field as well as with recent less formal research on this research topic.

The greatest strength of this study is not only the analysis and evaluation of 73 different data sources of the research topic and from the research field, but especially the subsequent combination of the most relevant conclusions that were extracted from the data sources and their synthesis. The synthesis has enabled this study to analyze the research topic of the role of legal tech startups in the digital transformation of the German legal industry in a way that had not yet been sufficiently done. Thereby, this study makes a contribution to the research field and on researchers work by closing this research gap, complementing what is already known in the literature about the digital transformation of the German legal industry with information regarding the role of legal tech startups in this transformation. At the same time, the study makes a positive contribution on practitioners’ work by clearly analyzing the different components of the research topic, the correlations and interrelations existing between them, and the consequent opportunities and threats that are created. Illustrating how legal tech startups
will increasingly penetrate the German legal industry, and facilitate and accelerate its digital transformation, this study may raise awareness of the research topic and its practical implications among the stakeholders of the legal industry but also beyond, e.g. in the venture capital and startup community that could accelerate the creation and growth of new legal tech startups and consequently could accelerate the digital transformation of the German legal industry even further. Finally, this study could have an eye-opening or wake-up call effect for industry stakeholders and could assist them to anticipate and prepare for the disruptions and the opportunities and threats legal tech startups’ legal tech innovations will introduce.

On the other hand, the validity of this study is limited in the way that it has taken only existing data sources into consideration for the analysis, evaluation, combination and synthesis. The results are a combination and synthesis of existing data, only, and not of both existing data and newly generated qualitative or quantitative data. In this sense, the results of this study represent the collectivity of what is known in the research community on this research topic. As this knowledge has been fragmented in the research community so far, this study makes a contribution to the research community by having combined and synthesized this knowledge and by providing it to the research community in a more comprehensive and concentrated way. Nevertheless, an alternative approach to address the research topic and the research gap could have been to reduce the scope of the literature research, and to compensate the reduction with new qualitative or quantitative data sources generated through interviews or focus groups, that could be analyzed in combination with the literature research data sources. Moreover, this study’s scope has only enabled a high-level analysis and evaluation of the research topic to fulfil the research objectives and answer the defining research question, to close the research gap in the research field. The study’s scope has not, however, permitted a detailed analysis of the same aspects, which might have provided more relevant and practical insights. As such, this
study is a first attempt to bridge the research gap in the research field and to provide an
assessment of the research topic, i.e. of the role of legal tech startups in the digital
transformation of the German legal industry. Future efforts to gain more detailed insights on
the research topic and to bridge the research gap further are greatly encouraged and may be
generated through additional studies concentrating on specific stakeholder groups, legal
practice and operational areas, legal technologies and legal tech innovations, or on business
model innovations by legal tech startups. Also, future studies may provide answers to open
questions, such as at which pace the transformative change in the German legal industry is
bound to happen, as well as the adoption of legal tech innovations by different stakeholder
groups, especially by law firms, and the liberalization and democratization of legal services,
and why; and which professional groups in the legal industry will be threatened entirely in the
long term. Furthermore, it could be interesting for future studies on the same topic, to analyze
the technological developments, especially in the fields of blockchain, big data analytics,
machine learning, and artificial intelligence, and their effects in more detail to assess the gap
between the technological possibilities and what has been implemented in the legal industry so
far, and to conduct thorough case studies of disruptive business models that are emerging, and
of the ways they are facilitating and accelerating the digital transformation of the German legal
industry even further. Moreover, the opportunities and threats for other stakeholders, such as
law schools, prosecutors, public defenders, court systems, and other local, state, national, and
international regulatory and administrative bodies of justice, as well as incumbent legal
software providers, and service providers to the legal industry in areas, such as office supplies
and legal publishers, would be interesting to analyze in detail. Finally, conducting empirical
studies, such as structured interviews or explorative focus groups with the different stakeholder
groups of the German legal industry could bring even further insights and correlations to light.
References


The Role of Legal Tech Startups in the Digital Transformation of the German Legal Industry


Master Thesis - Zoë Andreae

### Appendix A: Data Source Overview

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<tr>
<th>Author</th>
<th>Title</th>
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### Appendix B: Source Relevancy to Research Objectives

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<td>RO3: Legal tech startups</td>
<td>(Bonacker, 2015; Bues, 2016a, 2016b; CB Insights, 2016; Christensen et al., 2013; Curle, 2016a, 2016b; Dewey, 2016; Financial Times, 2016; Goodenough, 2015; Goodman &amp; Harder, 2014; Hartung, 2015a, 2016; Juetten, 2015; Kuhlmann, 2016a; Legal Tribune Online, 2016b; Lienemann, 2016; Lienemann &amp; Barth, 2016; Lopez, 2016a; MITRATECH</td>
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