

Exploring the Gap between the Academic and Practical Perspective of Legal Tech

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Outline

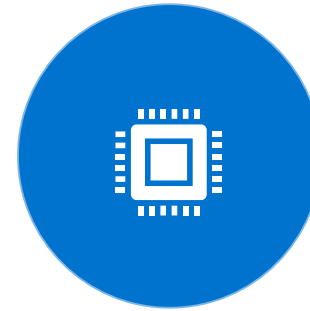
- Introduction to Legal Tech
- NLawP Project
- Motivation

- Research Question
- Methodology
- Initial Findings

- Timeline



LAW



TECHNOLOGY



Legal Tech Classification: [1] Goodenough, 2015

Research Objectives



Map state of the art applications and their implications concerning responsible AI.



Look into next steps concerning a sustainable data infrastructure for the legal sector.



Inquire into potential innovations and stakeholders: A multi-perspective methodology will give a view to innovation, adoption, responsible uses.

Research Questions

What are the risks and opportunities of using NLP technologies in the legal sector and how can the design of these applications be influenced towards adaptability and the common benefit?

- How is legal tech evolving through new applications based on recent progress of AI and what are the prevalent ethical, legal and social aspects?
- What are options for improving the data infrastructure based on legislative developments in European law and national law?
- What are the ideas and expectations of stakeholders regarding the application of AI technologies and what can we learn from that for the assessment of NLP in legal tech and beyond?

[2] Sebis, 2023

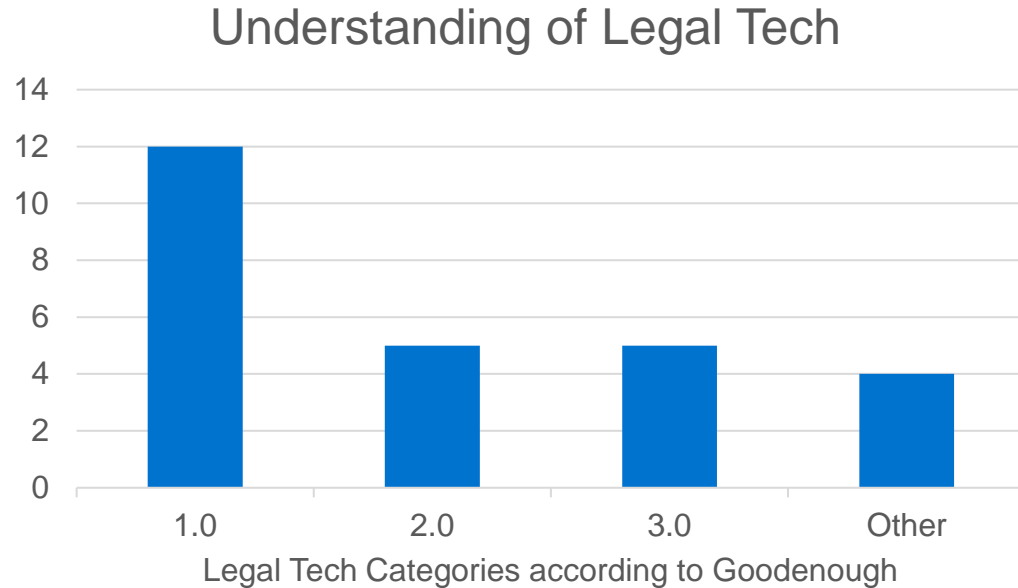


Figure: [3] Preis, 2023

→ **Lack of understanding and adoption of Legal Tech**

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It is well-documented that upgrading legal technology can improve efficiencies and increase profitability, yet many law departments are reluctant to let go of current processes.

[5] Legal Suite, 2022
(International Legal Consulting Firm)

63% of in-house legal work is routine or can be standardized

[4] Gartner, 2019

Research Questions

RQ1

How can the adoption of legal tech in academia and practice be effectively measured in terms of usage and impact?



Theoretical concepts, justification for development of the interview guideline

RQ2

What is the current state of legal tech in practice, and what are the prevailing challenges and limitations, compared to the current state of legal tech in academia?



Results from Interviews: List of positive / negative user stories

RQ3

Which reasons or success factors influence the adoption rate of legal tech in practice and how can barriers hindering adoption be addressed?



Results from Interviews: Collection of best practices

RQ1: How can the adoption of legal tech in academia and practice be effectively measured in terms of usage and impact?

Goal

- Develop the Interview Guideline with academically proofed methods

Methodology

- Literature Review
- Incorporate Papers and Journals

Findings

- Technology Acceptance Model (TAM) and its developments

Problem

- Our research needs to focus on an entire group, not a specific technology

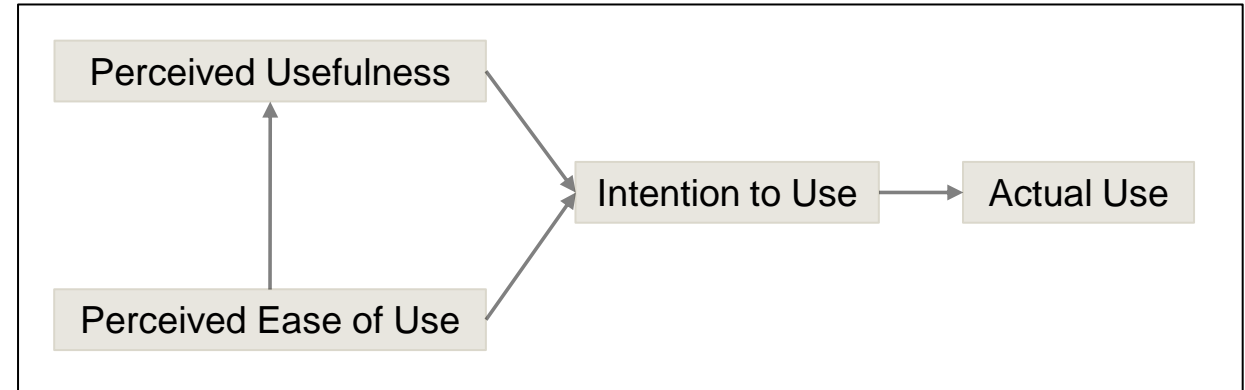


Figure: Technology Acceptance Model; [6] Davis, 1985

RQ2: What is the current state of legal tech in practice, and what are the prevailing challenges and limitations, compared to the current state of legal tech in academia?

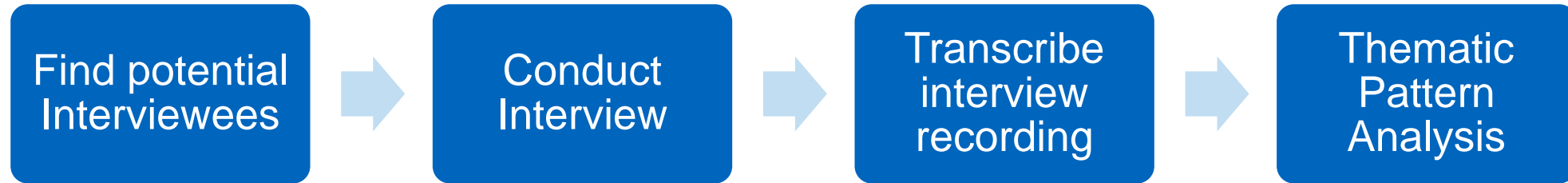
RQ3: Which reasons or success factors influence the adoption rate of legal tech in practice and how can barriers hindering adoption be addressed?

Goal

- Collect actual user stories:
Failures and Success Stories

Methodology

- Semi-Structured Interviews
 - Current Status: 10/20
 - Interviewees: Attorneys, Tax Consultants, Notaries, Judges, Start-Ups, Academic Researchers



Interviewee Sources

- First Degree Contacts
- Second Degree Contacts

Interviewee Categories

- Academia
- Legal Practitioners
- Start-Up

Einführungsfragen

- Welchen Beruf üben Sie derzeit aus?
- Wie viele Jahre Berufserfahrung haben Sie in diesem Bereich?
- Welche Größe besitzt die Organisation, bei welcher Sie arbeiten? (Ungefähre Mitarbeiteranzahl)
- Für welche Aufgaben, die Sie ständig manuell ausführen müssen, wünschen Sie sich eine Legal Tech Lösung?

Verständnis von Legal Tech

- Was verstehen Sie unter dem Begriff Legal Tech?

Nutzung von Legal Tech

- Benutzen Sie Legal Tech Software in Ihrem Arbeits-Alltag? Welche, wozu? (Wie kam es zur Einführung, wer hat entschieden? Beteiligte? Positive / Negative Auswirkungen? Nützlichkeit im Vergleich zur vorherigen Lösung? Wie hoch ist der Aufwand der Einführung dieses Tools?)
- Success Stories: Welche Legal Tech Produkte konnten Sie erfolgreich einführen, und was hat zum Erfolg beigetragen? Gab es Schwierigkeiten, die überwunden werden mussten?
- Failures: Bei welchen Legal Tech Produkten gab es Schwierigkeiten, und welche waren diese? Wie können diese in Zukunft vermieden werden?
- Kennen Sie weitere konkrete Produkte welche Sie jedoch nicht verwenden? Warum verwenden Sie sie nicht?

- Haben Sie bereits Erfahrungen mit Eigenentwicklungen von Legal Tech Software machen können? Warum haben Sie sich für eine Eigenentwicklung entschieden?
- Wie beeinflussen externe Faktoren (Gesetzesänderungen, Erwartungen von Mandanten, Wettbewerb) die Nutzung von Technologie in Ihrer Organisation?

(Nur für Forschende:) Legal Tech Forschung

- Welche Themen sind aktuell in der Legal Tech Forschung relevant?
- Wie weit sehen Sie die Umsetzung Ihrer Forschung / Forschungsergebnisse in der Praxis fortgeschritten?
- Wie sehen Sie die Kooperation zwischen der akademischen Welt und der Praxis? Welche Empfehlung oder Wünsche haben Sie für die Zukunft?

Entwicklung von Legal Tech

- Hat sich Ihre Nutzung von Legal Tech Software in den letzten Jahren geändert? Wenn ja, wie?
- Wodurch entsteht in Ihrer Organisation Innovation? (Personen, Mechanismen, Informationsquellen)
- Welche Faktoren unterstützen, Ihrer Erfahrung nach, die Einführung neuer Legal Tech Software, und welche hindern sie?
- Wie schätzen Sie die weitere Entwicklung im Bereich Legal Tech ein? (Trends, Neue Technologien, Sorgen, Wünsche, Ideen) Wo sehen Sie Ihre Organisation bzgl. Legal Tech in 5 bis 10 Jahren?

Introductory questions

- What is your current profession?
- How many years of work experience do you have in this field?
- What is the size of the organization where you work? (Approximate number of employees)
- For what tasks that you have to perform manually all the time would you like a legal tech solution?

Understanding of Legal Tech

- What do you understand by the term Legal Tech?

Use of Legal Tech

- Do you use legal tech software in your day-to-day work? Which one, what for? (How was it introduced, who decided? Who was involved? Positive / negative impact? Usefulness compared to previous solution? What is the cost of introducing this tool?)
- **Success Stories:** What legal tech products were you able to successfully implement, and what contributed to their success? Were there any difficulties that had to be overcome?
- **Failures:** Which Legal Tech products experienced difficulties, and what were they? How can these be avoided in the future?
- Do you know of any other specific products which you do not use? Why do you not use them?

- Have you already had experience with in-house developments of legal tech software? Why did you decide to develop your own software?
- How do external factors (legislative changes, client expectations, competition) influence the use of technology in your organization?

(For researchers only:) Legal Tech Research

- What topics are currently relevant in legal tech research?
- How far advanced do you see the implementation of your research / research results in practice?
- How do you see the cooperation between academia and practice? What recommendation or wishes do you have for the future?

Development of Legal Tech

- Has your use of legal tech software changed in recent years? If so, how?
- What is the source of innovation in your organization? (People, mechanisms, information sources)
- In your experience, what factors support the adoption of new legal tech software, and what factors hinder it?
- How do you assess further developments in the field of legal tech? (Trends, new technologies, concerns, wishes, ideas) Where do you see your organization regarding legal tech in 5 to 10 years?

Legal Tech Usage varies

Interview ID	Profession	Used Legal Tech Applications
INT-01	Tax Consultant	DATEV, StoTax, IDGuard, Steuersoft
INT-02	Notary	Knowledge Management, Contract Generation / Text assembly
INT-03	Attorney	Juris, Datev, RAMikro, Document management
INT-04	Tax Consultant	DigiBase, Datev-DB, IntraKomuna
INT-05	Tax Consultant	Own Development: Platform for Communication and Information Management
INT-06	Attorney (Start-Up)	Development of own solution for Accounting
INT-07	Attorney (Start-Up)	Development of a solution for contract compliance checking
INT-08	Attorney	Law Firm Management, MS Teams, beA
INT-09	Attorney	BeckOnline, RAMikro, beA, Dragon
INT-10	Attorney	LawLift Document Analysis, Contract Generation, Due dilligence
... more coming soon		

Current State in Practice

- Understanding of Legal Tech varies from Legal Tech 1.0 – 3.0
- Usage mainly 1.0, sometimes 2.0

Challenges / Limitations

- Short term effort when adopting new solutions only pays off in the long term
- Law Firm IT is currently maintained by small companies.

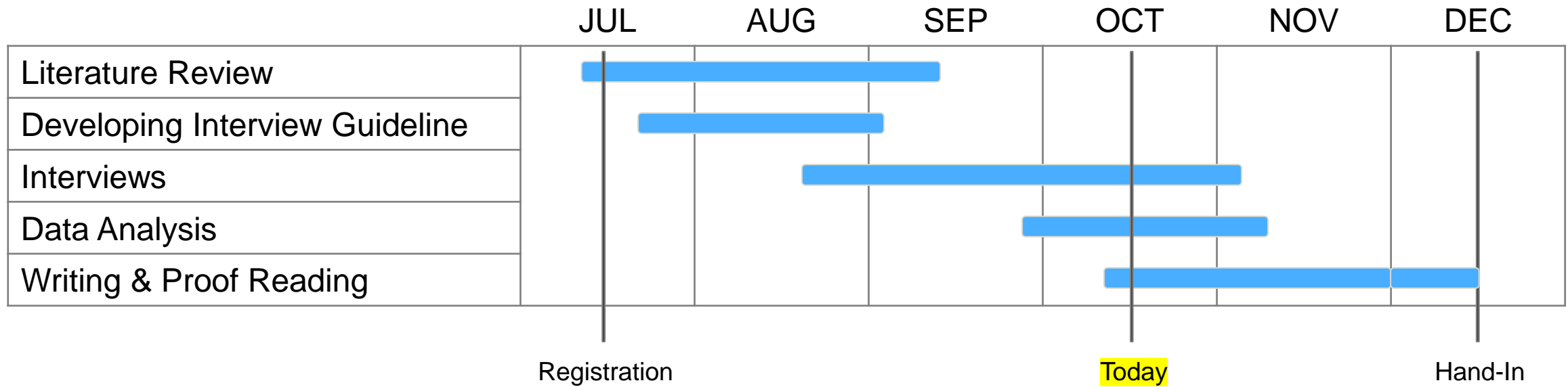
Barriers

- Legal Requirements
- Correlation between age and digital affinity and decision-making power

Success Factors

- Active participation of an interviewee in the testing of new features
- Strengthening the power of demands by merging with competitors

Timeline



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- [3] Preis, M. (2023). A Structured Overview of Use Cases for Natural Language Processing in the Legal Domain [Master Thesis]. TUM.
- [4] “Gartner Says Cost-Effective Legal Departments Invest Almost Twice as Much in Training Compared With Higher-Cost Peers.” Gartner, 5 Sept. 2019, www.gartner.com/en/newsroom/press-releases/2019-09-05-gartner-says-cost-effective-legal-departments-invest-.
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- [6] Davis, Fred D.. “A technology acceptance model for empirically testing new end-user information systems : theory and results.” (1985).



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