Laws × Digital Workshop [Part 1]

Introduction to Laws x Digital Initiatives

2024/03/08 Sho Yamauchi, Deputy Director, Digital Agency

デジタル庁
Digital Agency

Disclaimer

- Explanations pertaining to amendments to laws included in this presentation have been prepared by a member of staff taking clarity into consideration and do not represent the official view of the Japanese government.

Laws are the foundation of our society.
The public expects the development of services with high social value that utilize data of laws.

- Laws directly relate to the activities, rights and obligations of individuals, companies, and society.
- Legislation is often featured in news articles that explain key changes and in news reports on political affairs.

- The public expects the development of services with high social value that utilize data of laws.
- The text of laws in XML and API format will enable the development of services that utilize digital technology, including AI.

- Legislative affairs, which compile, analyze, and manage laws, are the foundation for data of laws.
- Current legislative affairs rely on visual and manual work. Improvements are urgently needed to maximize the use of digital technology.

Notifications of moving in


本文へ | サイトマップ | アクセス等 | 問い合わせ | 携帯サイト

新宿区 SHINJUKU CITY

サイト内検索 ? 検索の方法

文字サイズ： 標準 拡大

色変更・音声読み上げ Language

ホーム | くらし | 観光・文化 | 産業・ビジネス | 防災・防犯 | その他区政情報

早引きメニュー テーマから探す お手続きの情報・窓口案内 施設案内・利用予約

新宿区ホーム > くらし > 戸籍・住民票・印鑑登録・マイナンバーカード > 住民票等の証明・住所変更の届出 > 住所変更の届出 > 転入届（新宿区外から引越ししてきたとき）

くらし
- 戸籍・住民票・印鑑登録・マイナンバーカード
- 電子申請サービス
- 保険・年金・税金
- 出産・子ども・教育
- 福祉・介護
- 健康・医療・衛生
- ごみ・資源・環境
- 住まい
- 道路・交通・自転車
- みどり・河川・公園
- 地域共生・区民活動
- 多文化共生・国際交流
- 消費生活・相談
- 社会保障・税番号（マイナンバー）制度

ポスト シェアする LINEで送る

転入届（新宿区外から引越ししてきたとき）

最終更新日：2024年1月23日

新型コロナウイルスワクチン接種について

前住所地で発行した接種券を使わないようご注意ください。
詳しくはこちらをご覧ください。

対象となる方・届出について

対象となる方

新宿区以外の市区町村から新宿区に引越ししてきた方

届出できる方

- 本人または同一世帯の方
- 代理人に委任することもできます。（委任状が必要です）
  ※委任状は【戸籍住民課委任状】からダウンロードできます。

届出期間

引越ししてきた日から14日以内
※引越す前（住み始める前）には届出できません。

https://www.city.shinjuku.lg.jp/todokede/koseki03_000003_f.html

I will try to find laws which stipulate rules and procedures governing notifications of moving in.

Laws governing notifications of moving in (partially omitted)

- Residential Basic Book Act (Act No. 81 of 1967)

(Notification of Moving In)

Article 22 (1) A person who has moved in (omitted) must notify the mayor of municipality of the following matters (omitted) within 14 days of the date of moving in.

1. Name
2. Address
3. Date of moving in
4. Former address
5. to 7. (Omitted)

(2) (Omitted)

Describes strict rules and procedures

Laws governing notifications of moving in (partially omitted)

- Residential Basic Book Act (Act No. 81 of 1967)

(Notification of Moving In)

Article 22 (1) A person who has moved in (omitted) must notify the mayor of municipality of the following matters (omitted) within 14 days of the date of moving in.

1. Name
2. Address
3. Date of moving in
4. Former address
5. to 7. (Omitted)

(2) (Omitted)

Describes strict rules and procedures

```
function 第二十二条_転入届(person) {
    person.addEventListener("転入", e => {
        e.person.届出({
            target: e.市町村長,
            items: {
                氏名: e.person.氏名,
                住所: e.住所,
                転入をした年月日: e.年月日,
                従前の住所: e.従前の住所,
            },
            by: e.年月日.add(14, "day"),
        });
    });
}
```

(image)

Laws are “programs that describe society’s rules”

	Laws		Programs
	Describe strict rules and procedures	Structure / Role	**Describe strict rules and procedures**
	Relate to the activities, rights and obligations of individuals, companies, and society	Scope of Application	Data, equipment, user interface, etc.

（転入届）
第二十二条　転入（略）をした者は、転入をした日から十四日以内に、次に掲げる事項（略）を市町村長に届け出なければならない。
一　氏名
二　住所
三　転入をした年月日
四　従前の住所
五～七　（略）
２　（略）

```
function 第二十二条_転入届(person) {
    person.addEventListener("転入", e => {
        e.person.届出({
            target: e.市町村長,
            items: {
                氏名: e.person.氏名,
                住所: e.住所,
                転入をした年月日: e.年月日,
                従前の住所: e.従前の住所,
            },
            by: e.年月日.add(14, "day"),
        });
    });
}
```

(Image)

Laws and programs are similar in structure, but laws lack support tools

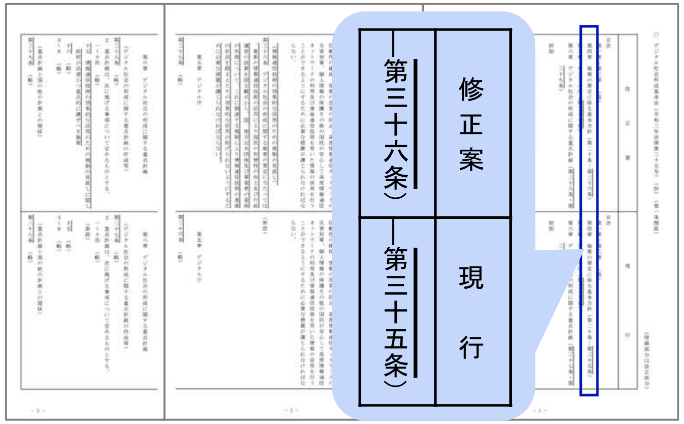
Laws		Programs
Describe strict rules and procedures	Structure / Role	**Describe strict rules and procedures**
General word processing software	Editing Tools	Useful editor dedicated to coding
Visual/manual work	Error Checks	Static check tools and debuggers
General file sharing tools	Version Management	Advanced version management tools

Examples of documents used in legislative affairs

Materials such as draft laws and comparative tables that compare old and new versions must be carefully reproduced in PDF or printed form*. Word processing software such as Microsoft Word("Word") and Ichitaro (a Japanese word processor) are used for editing. However, the work and data for the text and style are not separated, and the content of the word processing depends on the style of the individual document, making it less machine readable. → For this reason, the text, transcription, and editing style are all managed manually.

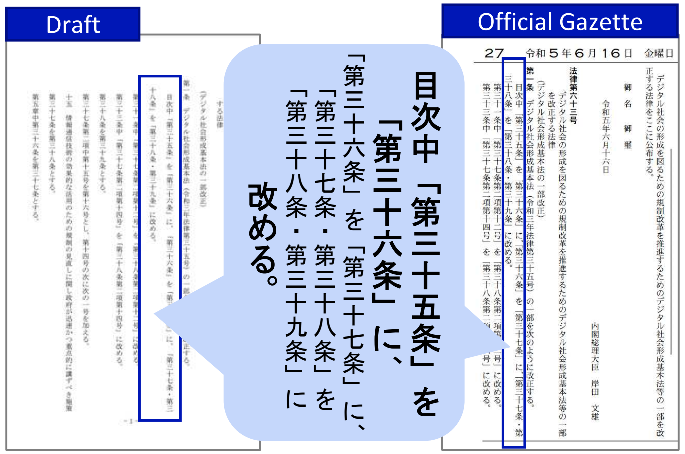
e-Gov Law Search is maintained and provided as a "Law XML", which is machine-readable and highly reusable

Comparison of old and new versions



- Document that explains how a law will be amended, which includes the text before and after the amendments, and underlines the changes.
- Used as a reference material when drafting laws.

Revised text



- Document that explains how a law is to be amended as a string operation.
- Target of decision-making and original version of the draft law.
- The "amendment act" itself, which amends the law, is also a law.

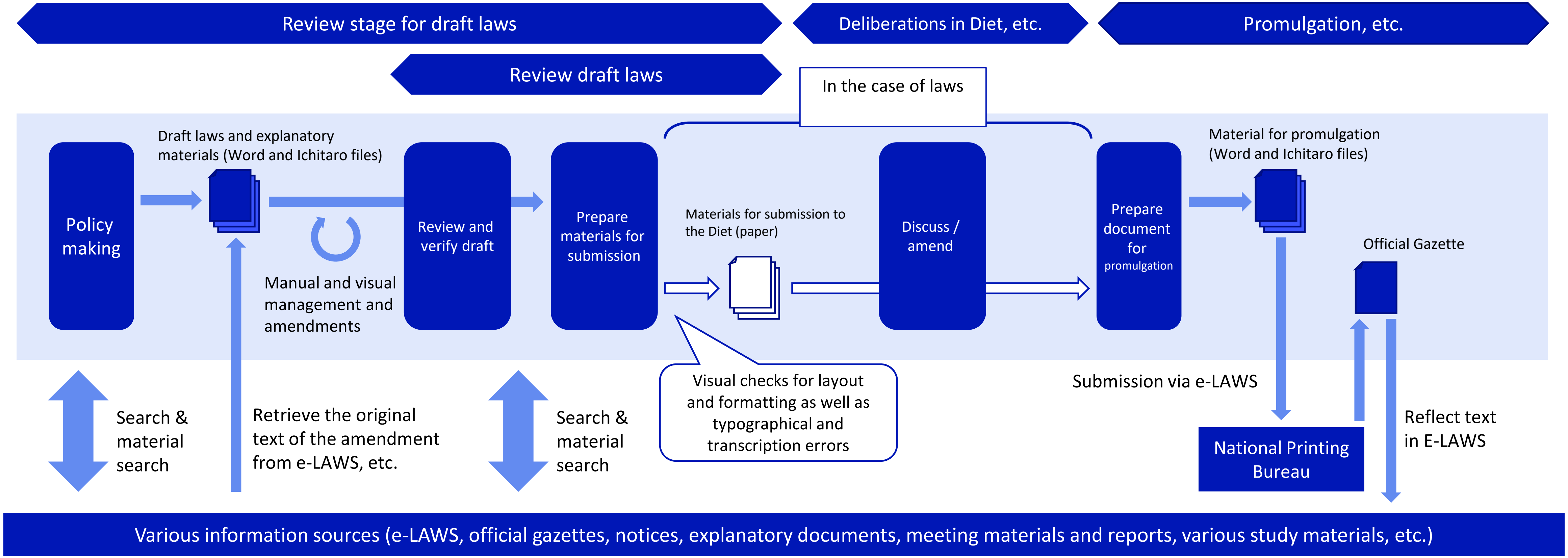
Merged text

- Results of the amendment's string operation. This format is usually used when reading laws.
- Applying revised text is called "merging". Creating and checking data currently requires manual work.

*The vertical writing style must be strictly adhered to in terms of indentation (character spacing), forbidden character processing, number of characters and lines, line spacing and so on" (Working Team on Digitalization of Legislative Affairs, Digital-related Institutional Reform Study Group, First Meeting, Document 4)

Current state of legislative affairs:
fragmented use of digital technology in the paper era workflow

Many types of data are involved. The management, transcription, and verification rely on manual and visual checks, in which manual errors are corrected by the same people. Resources that could have been invested in content, such as policy design, must be devoted to format issues.



Discussions on issues and prospects related to law x digital

Working Group on Digital Legislation: Members

Takahiro Anno	Author/AI Engineer
Tokuyasu Kakuta	Professor, Department of Global Informatic Studies, Faculty of Global Informatics, Chuo University
Soichiro Fujiwara	Attorney, Nagashima Ohno & Tsunematsu
Kei Horiguchi	Representative Director, FRAIM Inc.
Miki Yagita	President & CEO, Legalscape Inc.
Ken'ichi Yoneda	Professor, Judicial Policy Education Research Center, Kagoshima University
Yuichiro Watanabe	Attorney, Legal Affairs Division Manager, Airbnb Japan K.K.

Former Digital Extraordinary Administrative Advisory Committee

2021.11.16: First meeting

2021.12.22: Second meeting

→Formulation of "Digital Principles for Structural Reforms"

→ "Priority Policy Program for Realizing Digital Society" (cabinet decision in 2021.12)

Former Working Group

2022.2.10: First meeting

Former Working Team on Digitization of Legislative Affairs

2022.2.17: First meeting

・Matters to be deliberated, etc.

2022.2.28: Second meeting

・Existing system of legislative affairs, etc.
・Conformity check process/system
・Draft items for research on other countries

Points in questions, etc.

2022.3.16: Third meeting

・Conformity check process/system
・Digitalization of legislative affairs; BPR; sharing of roles between the public and the private sectors

3.23 Seventh meeting

3.30 Third meeting

2022.4.13: Fourth meeting

・Timeline for digitalization of legislative affairs
・Progress of research on other countries

Timeline, etc.

2022.5.13: Fifth meeting

・Progress of research on other countries
・Timeline for digitalization of legislative affairs
・Timeline for conformity check process

5.20 11th meeting

6.3 Fourth meeting

→ Formulation of "Plan for Overall Review of Regulations in the light of the Digital Principles"

Conformity checks, etc.

2022.9.12: Sixth meeting

・Preliminary draft of requirements, data structure, etc.
・Trial conformity check, etc.

9.28 14th meeting

10.27 Fifth meeting

2022.11.9: Seventh meeting

・Data of laws provision method
・Enhancement of utilization of law data

Details of survey/ verifications, etc.

2023.5.12: Eighth meeting

・Digital legislative review and digitalization of official gazette
・Survey and verification projects, AI utilization, etc.

5.17 21st meeting

5.30 Seventh meeting

→ "Priority Policy Program for Realizing Digital Society" (cabinet decision on 2023.6.9)

Digital-related Institutional Reform Study Group

Working Group on Digital Legislation

2023.10.27: First meeting

・Progress of survey and verification work
・Research and perspectives on AI x laws
・Results of AI x legislative affairs assistance experiment

2023.11.29: Second meeting

・API for Laws Hackathon Results
・National Printing Bureau digitalization efforts
・Analog regulatory inspection tool alpha version

12.5 Second meeting

Commenced research and verification project in FY2023

Summary of items to be implemented	Purpose of items to be implemented
(1) Research, etc. on legislative affairs and data of laws • Research and analysis of current status, examples, and needs, etc. of legislative affairs and data of laws Design and simulate workflows and data structures	• Establish a basis for designing and evaluating legislative affairs systems
(2) Research, studies, and prototyping of legislative affairs systems • Overall architecture • Editing and checking functions for data of laws Assume user testing where actual legal planning takes place • Provision of functions and utilization of data of laws Assumes interactive design and testing with API and other users	• Establish system feasibility and basic design for full-scale PoC and system development with actual implementation expected in FY2024 or thereafter • Foster understanding of the digitalization of legislative affairs through discussions with system users and law data users, and establish an environment that allows for constructive design and smooth transition in the future
(3) Surveys and research on the current status and future of digital legislation • Research and study the future vision of advanced technology utilization and elaboration of digital legislation roadmap • Assumes research and study with researchers and students from universities, etc.	• Clarify the long-term effects of the digitalization of legislative affairs and establish the significance and long-term goals of system advancement • Establish policies to realize effective policymaking through the use of data of laws in the future, and foster interest in research and development and human resource development

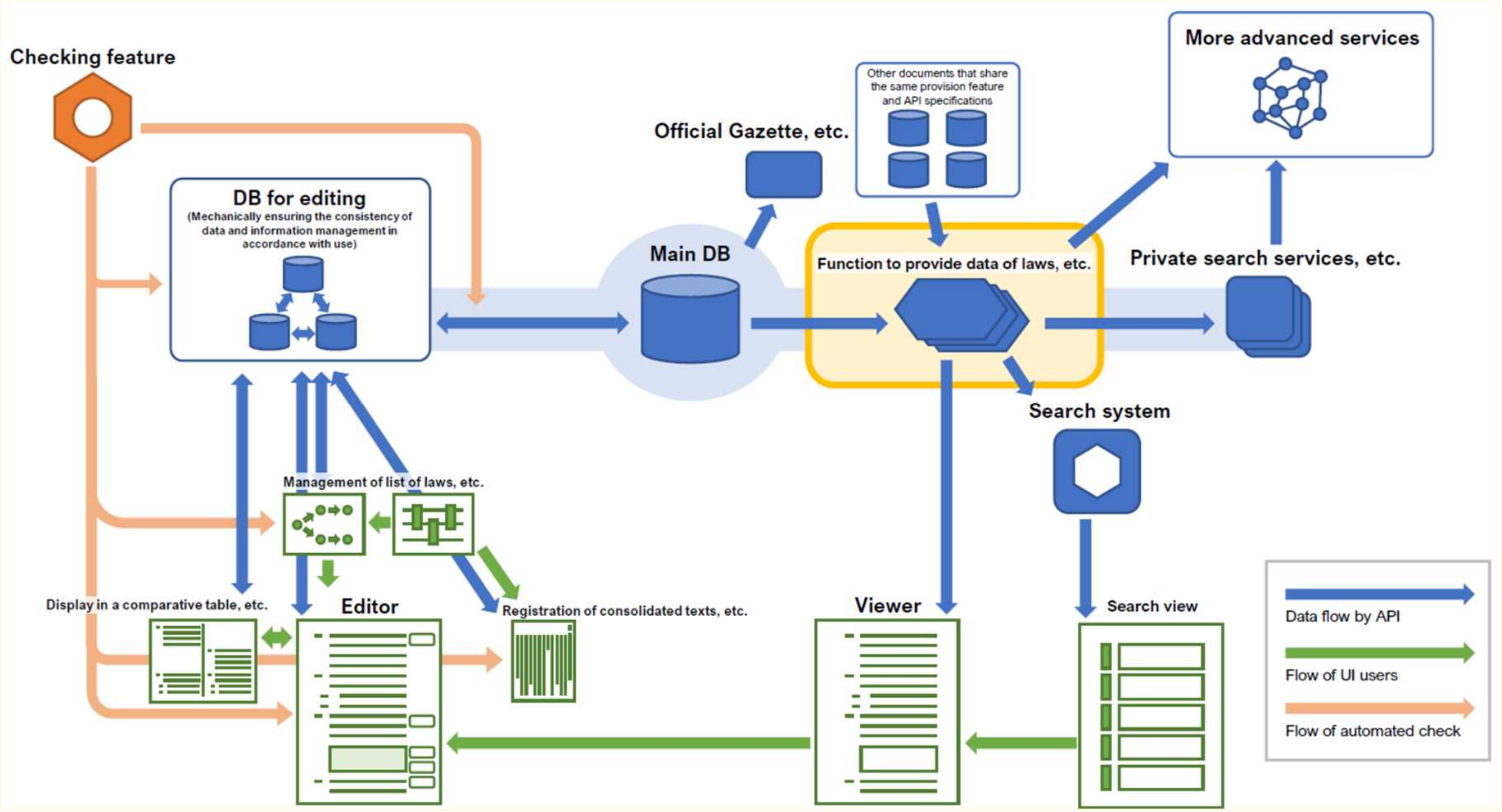
In Progress: Prototyping data infrastructure, editing function, provision function, etc.

Needs, workflows, and overall architecture

Editing and checking functions for data of laws

Provision of functions and utilization of data of laws

- Element product providers
- System administrator
- Data of laws
- Legislative Bureau of the House of Representatives, etc.
- Law reviewers
- Consultations on draft laws
- Laws draft editors
- People who view laws at each ministry/agency



- National Printing Bureau, etc.
- Providers of similar documents
- Law explanation provider
- Service developer
- Portal sites, etc.
- Law researchers
- Lawyers, etc.
- General public who views laws

History of efforts to compile and provide information on laws

- Efforts to compile and provide information on laws predate the development of digital technology.
- Currently, e-Gov Act Search[1] is available as a free online service, and laws, cabinet orders, and ministerial orders are maintained there as a base registry.
    - Base Registry: Data designated as “a group of data that should or can be utilized as a common infrastructure for services in the public or private sectors, which is collected by administrative organs, etc. based on their legitimate authority, which is based on reliable information in terms of accuracy and integrity and satisfies qualities such as up-to-dateness, standard compatibility, and availability,” (Digital Agency Public Notice No. 12 of 2023)
    - Not necessarily limited to laws (laws and ordinances) that function as rules in society[2]. Ensuring accessibility to rules not provided by e-Gov Law Search, etc., and for which there is currently no unified database, remains difficult.

History of the development and provision of data of laws

1949 Publication of “Existing Japanese Laws”

- Laws are updated through amendments, etc., and are published as an addendum

1979 Provision of a “Law Search System” by the Administrative Management Agency

- Database for national government administrative organs

2011 Provision of “Data of Laws Provision System”

- Free online service 2017 Provision of “e-Gov Law Search”
- Free online service Uses Legal Affairs Support System (e-LAWS) law database

[1] https://elaws.e-gov.go.jp/
[2] Digital Extraordinary Administrative Advisory Committee Working Group, Working Team on Digitization of Legislative Affairs (first meeting), Material 5

Progress is being made in the use of technology and creation of services in the law and legal affairs markets

Expectations of legal tech

Advances in “legal tech” services and businesses that utilize digital technology in the law and legal affairs fields. Companies were quick to react to the use of AI, developing technologies and creating services.

(Source) https://www.legalscape.jp/resource-seminar/resource/chaos2023

Infrastructure to enable utilization of data of laws: Legal Standard XML and API for laws

Legal Standard XML

An XML format that describes the paragraph structure of Japanese laws, defined in the “Legal Standard XML Schema”. Provided via e-Gov law search and API for laws.

```xml
</TOC>
<MainProvision>
  <Chapter Num="1">
    <ChapterTitle>第一章　総則</ChapterTitle>
    <Article Num="1">
      <ArticleCaption>（目的等）</ArticleCaption>
      <ArticleTitle>第一条</ArticleTitle>
      <Paragraph Num="1">
        <ParagraphNum/>
        <ParagraphSentence>
          <Sentence Num="1" WritingMode="vertical">この法律は、処分、行政指導及び届出に関する手続並びに命令等を定める手続に関し、共通する事項を定めることによって、行政運営における公正の確保と透明性（行政上の意思決定について、その内容及び過程が国民にとって明らかであることをいう。第四十六条において同じ。）の向上を図り、もって国民の権利利益の保護に資することを目的とする。</Sentence>
        </ParagraphSentence>
      </Paragraph>
      <Paragraph Num="2">
        <ParagraphNum>２</ParagraphNum>
        <ParagraphSentence>
          <Sentence Num="1" WritingMode="vertical">処分、行政指導及び届出に関する手続並びに命令等を定める手続に関しこの法律に規定する事項について、他の法律に特別の定めがある場合は、その定めるところによる。</Sentence>
        </ParagraphSentence>
      </Paragraph>
```

About Legal Standard XML: https://elaws.e-gov.go.jp/download/

API for laws

API for retrieval of a list of laws, and the full text of laws in XML format, etc. Currently provides data on current ministerial ordinance and higher ranking laws.

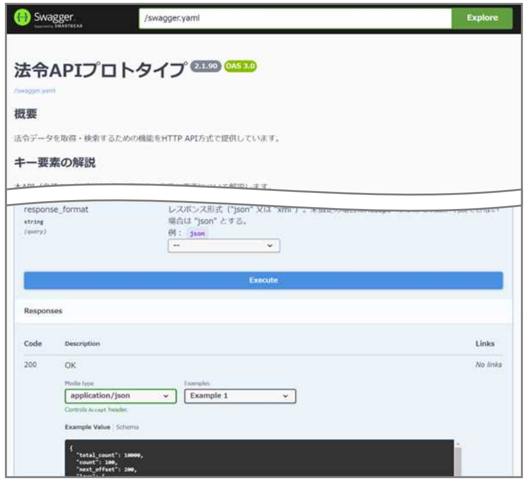
```
> fetch("https://elaws.e-gov.go.jp/api/1/lawlists/3")
      .then(r => r.text()).then(console.log)
< ▸ Promise {<pending>}
  <?xml version="1.0" encoding="UTF-8"?>
  <DataRoot>
    <Result>
      <Code>0</Code>
      <Message/>
    </Result>
    <ApplData>
      <Category>3</Category>
      <LawNameListInfo>
        <LawId>105DF0000000337</LawId>
        <LawName>明治五年太政官布告第三百三十七号（改暦ノ布告）</LawName>
        <LawNo>明治五年太政官布告第三百三十七号</LawNo>
        <PromulgationDate>18721109</PromulgationDate>
      </LawNameListInfo>
      <LawNameListInfo>
```

About API for Laws: https://elaws.e-gov.go.jp/apitop/

Development of prototypes for expanding the features of the API for laws

Usability for developers is also taken into consideration

Added functions not offered by the current API for laws, such as the text of laws before their amendment and a keyword search function. Designed taking into consideration “usability” for developers who program directly using the API.



(Screens shown are under development)

- Added features such as **providing pre-amendment text of laws** and **a keyword search** function
- API specifications are provided as **Open API Specifications**. The API can be tested on an interactive screen on the Swagger UI, and stub code can be generated automatically.
- **Sample code (simple law viewer built using Next.js)** has been provided to show how to use the API.
- Standardized data item naming conventions throughout the API. (Currently, items with the same meaning can have different identifiers in different places)
- Added a feature to refine data searches. Added a pagination feature for large volumes of data.
- Added an endpoint that provides binaries, such as images attached to text, in binary form. (Currently, zip-compressed Base64 strings are returned embedded in XML)
- Previously only returning in XML was possible, but features have been expanded to give users the option of returning in JSON.

API for laws hackathon

- Organized a hackathon (service development trial event) to promote the usage of the API for laws for the development of services, etc. A total of 14 teams and 56 participants participated.
- The hackathon ran from Friday, November 10, 2023 to Friday, November 17, 2023. Hybrid workshops were held on the 10th (Friday) and 16th (Thursday). Representatives from each team gathered at the venue on the 17th (Friday) to present and take part in the award ceremony.
- The presentations were evaluated and scored by three expert judges, who then each awarded a prize to the team that excelled from their respective professional perspectives.

Awards and judges

Award for Disseminating and Researching Laws Awarded from the perspective of disseminating laws and promoting research	Judge: Kenichi Yoneda Professor, Judicial Policy Education Research Center, Kagoshima University Member, Working Group on Digital Legislation
Business and Legal Affairs Award Awarded from the perspective of revitalizing business and improving convenience for legal professionals	Judge: Masakazu Masushima Attorney, Mori Hamada & Matsumoto Member of the Digital-related Institutional Reform Study Group
Technology Utilization Award Awarded from the perspective of the creation of services and businesses that use technology	Judge: Miki Yagita President & CEO, Legalscape Inc. Member, Working Group on Digital Legislation

https://www.digital.go.jp/policies/legal-practice/hackathon

Results of legislative affairs assistance experiments using AI, etc.

Outline of experiments

- Purpose: To examine the suitability of AI that uses LLM in legislative affairs, and identify what can be achieved in the short term, and what needs to be considered in the medium to long term.
- Method: Staff experimented with the idea of legislative affairs assistance using existing products. Experiment examples were solicited from staff working at the Digital Agency.
- Tools: Mainly used the test environment provided to the Digital Agency for experimental purposes. The API for laws and various codes were also used as needed.
- Number of experiments: 24 experiments were conducted by 12 members of staff between June and October 2023. Together with the experiments conducted before May, this brings the total number of experiments to 30. (Experiments with multiple prompts within a single experiment)

Outline of experiment results

- Created materials and charts based on documents such as text and policy outlines and several idea-generating experiments gave the impression that there are certain results that could be achieved in the short term. In particular, a reduction in the time required to draft materials was observed along with the ability to come up with ideas in a short period of time.
- On the other hand, simple prompts frequently failed to produce the intended output in experiments that generated text or performed checks specific to law texts. Further research is thought to be necessary in the mid- to long-term, such as devising prompts and breaking down issues.
- In both cases, checks of the output by a person with experience in legislative affairs, found that multiple examples of output that required correction, and therefore, combining human checks or automatic checks by a rule-based checking program, etc. would likely be effective.
- In addition, several examples of experiments in combination with the API for laws were reported. Some were reported as being highly practical, and so, in addition to the development of APIs and data of laws, etc., the development of legislative affairs assistance apps by combining APIs and data of laws with AI would likely be effective.

Characteristics of AI that use LLM and considerations from a legislative affairs perspective

General characteristics

LLMs are a language model

- Model trained to generate natural sentences and exchanges. Adapts to diverse and flexible tasks by explaining the task, giving examples, etc. without any further fine tuning. However, on its own, calculated, logical reasoning is by no means certain, and searches are not conducted. Ways to improve the model by devising prompts or combining it with external APIs are also being studied.

LLMs requires appropriate expertise on the part of the user

- In principle, whether the output is factual or appropriate is another question altogether. Users must have sufficient knowledge and skills to analyze and judge the accuracy and validity when using the output.

Users and developers must be careful of LLM's hallucinations

- The output is trained to be fluent and can project a sense of confidence that intuitively tempts users and developers to accept it. Special attention should be paid to objective and critical analysis, without being deceived by the LLM's eloquence.

Considerations from a legislative affairs perspective

- Expected to be effective in linguistic tasks such as summarizing, which are not dependent on external information. For tasks such as searching and analyzing laws and the text thereof, having a law database API to serve as the basis, is considered necessary. After that, processing that combines APIs and the output of proposed program code is conceivable.

- For example, tasks that summarize and polish text are thought to require the ability to analyze and judge whether the output summary is accurate and whether the text is appropriate as a law. Based on this premise, such AI is expected to be effective when used in brainstorming to come up with ideas that may otherwise be overlooked.

- Legislative affairs tasks require particular stringency in complex situations, and therefore it is necessary to have a mechanism to ensure appropriate attention is paid to the output even when that output seems plausible. May be effective when used in conjunction with another deterministic check function to ensure rules are strictly applied.

Example: creating documentation based on the text of a law

***This page shows the output as-is. The accuracy and validity of the content has not been verified. The content may include “plausible errors.”**

- Frequently cited usage examples include processing and summarizing text, changing wording, and creating documents based on text.
- The example on the right assumes use in a manual for government employees and shows the generation of a flowchart on public commenting procedures under the Administrative Procedure Act.
- In terms of the content, problems include items not being exhaustive or referring to different provisions. Given that a chart has been output, and assuming that staff capable of interpreting the law can revise the content, will this reduce the time required to complete the task?
- In addition, given that the Administrative Procedure Act is considered to be a relatively structured text that is easy for LLMs to handle, further verification is needed to determine whether it will work in more complex cases.

User

職員のマニュアルに活用するために、行政手続法上、パブコメが要・不要かどうかを判定する図を作成してください。条項ごとになるべく細かく分岐が分かるようにしてください。図は、下記の「図を書く際の注意」に従って書いてください。

図を書く際の注意
- フローチャートをMermaid構文で書いてください。
- 図のそれぞれの項目の中の文章は「"」で囲む必要があることに注意してください。
- 図のそれぞれの項目には、条項番号に加え、条文の本文に従って、どのようなことを判断すればよいか分かるように、図の項目の中に、概要をそれぞれ50文字程度で含めてください。図の中の文章は、だいたい15文字程度ごとに、見やすい位置で「¥n」で改行してください。

System（長いため抜粋。日本語19k文字、約31kトークン）

あなたは法令解釈の専門家です。ユーザからの質問には、以下の参照条文に基づいて答えてください。回答にはなるべく条番号などの根拠を含め、また、参照条文に根拠がない回答は行わないか、根拠が見つからないと答えてください。

参照条文

行政手続法
（平成五年法律第八十八号）

目次　～～～

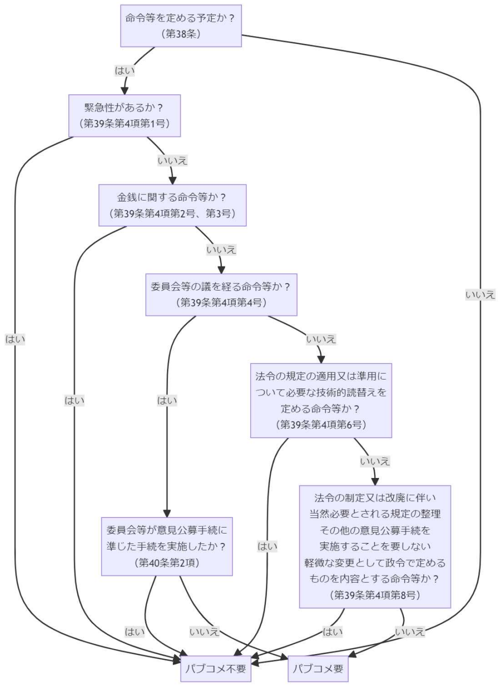
　第一章　総則

（目的等）
第一条　この法律は、処分、行政指導及び届出に関する手続並びに命令等を定める手続に関し、共通する事項を定めることによって、行政運営における公正の確保と透明性（行政上の意思決定について、その内容及び過程が国民にとって明らかであることをいう。第四十六条において同じ。）の向上を図り、もって国民の権利利益の保護に資することを目的とする。
２　処分、行政指導及び届出に関する手続並びに命令等を定める手続に関しこの法律に規定する事項について、他の法律に特別の定めがある場合は、その定めるところによる。

～～～

出力（Model: GPT-4、VSCodeでレンダリング）

以下に、行政手続法上、パブコメが要・不要かどうかを判定するフローチャートをMermaid構文で作成します。



このフローチャートは、行政手続法の第38条から第40条までの規定に基づいて作成されています。各ステップでは、特定の条項に基づく判断が求められます。"はい"の回答がある場合、次のステップに進みます。"いいえ"の回答がある場合、パブコメが不要であるか、または必要であるかが示されます。

Example: answering questions combined with the API for laws

*This page shows the output as-is. The accuracy and validity of the content has not been verified. The content may include “plausible errors.”

- Practical example that uses LLM to determine which API to invoke from a natural language question to answer the question by combining it with the API for laws.
- The example on the right obtained not only the text specified by the prompt, but also another text based on the content of that text, and is an example of a task that required the identification of the presence of a defined term in the text.
- The parts quoted in square brackets match the actual text. Combing with the API for laws, enables confirmation that it is possible to perform certain tasks based on the exact content of the text.
    - It would be beneficial to engage in further research on the kinds of questions that can be answered, research on user interfaces that make it easier to ask questions, and research on extending the functionality of the API for laws to enable flexible questions.

プロンプト

行政手続法（平成五年法律第八十八号）第一条で、用語を定義している箇所があったら、どのように定義しているか説明してください。また、その定義が対象条項を指定している場合、指定された先の条項の内容を調べ、当該用語がその条項においてはどのように使われているか説明してください。回答は最後にまとめて出力してください。

実験環境

LangChain (JS) と、GPT-4のfunction callingを用いて、法令APIと連携できるようにした環境

↓ LangChain uses the API for laws to obtain Article 1 of the Administrative Procedure Act based on GPT-4 output (function_call)

↓ The output of the API for laws is passed onto GPT-4 and Article 46 of the Administrative Procedure Act is obtained based on the new GPT-4 output

出力（Model: GPT-4、最終出力のみ）

行政手続法（平成五年法律第八十八号）第一条では、「透明性」について「行政上の意思決定について、その内容及び過程が国民にとって明らかであること」と定義しています。また、この定義は「第四十六条において同じ」とされています。

第四十六条では、「地方公共団体は、第三条第三項において第二章から前章までの規定を適用しないこととされた処分、行政指導及び届出並びに命令等を定める行為に関する手続について、この法律の規定の趣旨にのっとり、行政運営における公正の確保と透明性の向上を図るため必要な措置を講ずるよう努めなければならない」と記載されています。ここでの「透明性」は、地方公共団体の行政運営における意思決定の内容や過程が国民に明らかであるべきであるという意味で使われています。

Example: generating draft text

***This page shows the output as-is. The accuracy and validity of the content has not been verified. The content may include “plausible errors.”**

- This use has generated a lot of interest. However, there are many issues with the simple prompts that are currently being tested, including the lack of specific provisions necessary for a legal system, and the lack of consideration with respect to existing laws, defined terms, and important proper nouns, etc.
- By adding details to the instructions, such as explaining the regulations or how the content is specific to the law concerned, it is possible to get closer to the appropriate text, but there are situations in which it would be faster to write the draft directly.
- On the other hand, even without any specific instructions, text may be generated that includes exceptions and penalties and thus such usage may be effective for generating ideas.

プロンプト

以下に示す法案概要をもとに、法律の条文を書いてください。

法案概要
実験等無線局の開設及び運用に係る特例の整備
実験等に用いる無線設備（携帯電話端末及びWi-Fi機器等に限る。）が適合表示無線設備でない場合であっても、我が国の技術基準に相当する技術基準に適合しているときは、一定の条件の下で、当該無線設備を使用する実験等無線局の開設及び運用を可能とする制度を整備する。

出力（Model: GPT-4、一部空白行削除）

法律条文

第一条（実験等無線局の開設及び運用に係る特例）
1. 本法は、実験等に用いる無線設備（携帯電話端末及びWi-Fi機器等に限る。）が適合表示無線設備でない場合であっても、我が国の技術基準に相当する技術基準に適合しているときは、一定の条件の下で、当該無線設備を使用する実験等無線局の開設及び運用を可能とする制度を整備することを目的とする。
2. 本法において「実験等無線局」とは、実験等に用いる無線設備を使用する無線局をいう。
3. 本法において「適合表示無線設備」とは、我が国の技術基準に適合していることが確認され、適合表示が行われた無線設備をいう。

第二条（実験等無線局の開設及び運用の許可）
1. 実験等無線局の開設及び運用は、適合表示無線設備でない無線設備を使用する場合であっても、我が国の技術基準に相当する技術基準に適合していると認められた場合に限り、情報通信省の許可を得て行うことができる。
2. 前項の許可を得るためには、情報通信省に対し、該当する無線設備の技術基準の適合性に関する証明書及びその他の必要な書類を提出しなければならない。

第三条（適用除外）
本法は、公共の安全や秩序を害するおそれのある無線設備については適用しない。

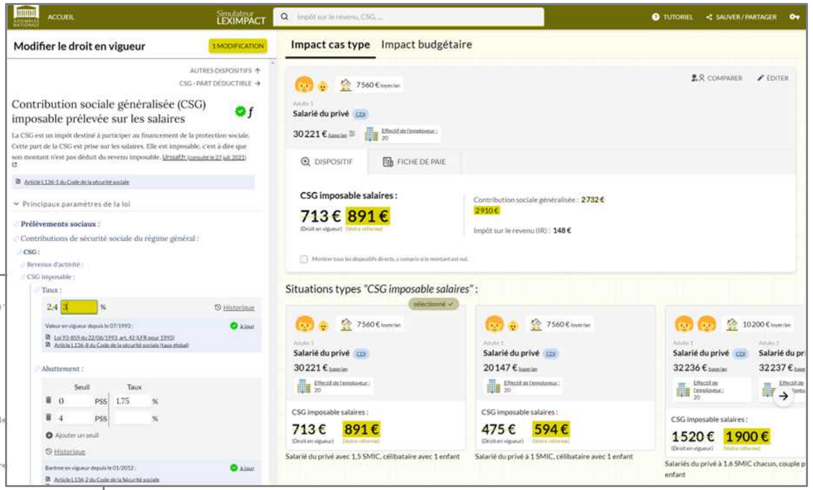
Streamlining and rationalizing policy making and administrative management using machine-executable laws: Rules as Code

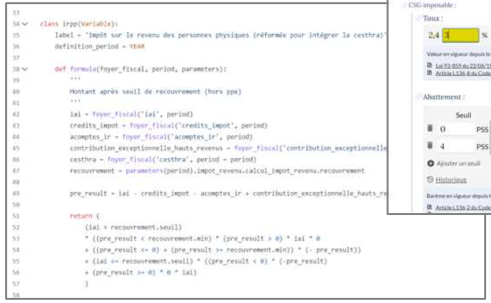
Rules as Code (RaC)

- (Although definitions vary in the text,) A process or concept that aims to streamline and rationalize policy making and administrative management by describing rules such as laws in a machine-executable format to simulate the effect of a law before its introduction, or by directly implementing laws in a system.
- Pilot projects and studies are being conducted in various countries, including the New Zealand government's "Better Rules" project (*1), the French government's "OpenFisca" project (*2), the Canadian government's pilot project relating to natural resource extraction regulations (*3), and an OECD report (*4).
- Current initiatives focus on areas that can be expressed numerically, such as taxes and benefits.

Screenshot taken from video introducing the Better Rules project. (https://www.youtube.com/watch?v=S4KWlmQBAc0&t=99s)

"LexImpact", a tax and benefit simulator built using OpenFisca (https://leximpact.an.fr/dotations)





← Example of French OpenFisca code (https://github.com/openfisca/openfisca-france/)

(※1) https://www.digital.govt.nz/dmsdocument/95/html
(※2) https://openfisca.org/en/
(※3) https://digital.canada.ca/2023/10/12/mining-for-ideas-to-simplify-a-complex-process/
(※4) https://doi.org/10.1787/3afe6ba5-en

Initiatives emerging from research of advanced technology utilization

COLIEE, an international Competition on Legal Information Extraction and Entailment

- International competition in which teams compete against each other on accuracy with regard to tasks relating to legal documents, including laws and judicial precedents, such as retrieving documents and paragraphs and answering questions.
- Teams also compete for the highest percentage of correct answers to yes/no questions on the Japanese bar exam (Task 4).
- 30 teams from 25 countries participated in COLIEE, held on June 19, 2023, in Portugal.

(Reference) http://research.nii.ac.jp/~ksatoh/COLIEE2023proceedings.pdf

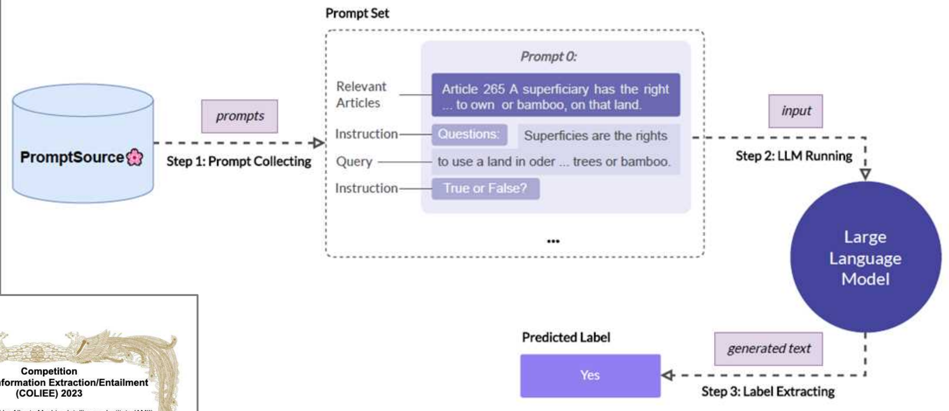


Figure 5: Overview of our method in Task 4.

Competition
on Legal Information Extraction/Entailment
(COLIEE) 2023

Sponsored by Alberta Machine Intelligence Institute (AMII)
University of Alberta
National Institute of Informatics (NII)

Team name: JNLP
Affiliation: Japan Advanced Institute of Science and Technology (JAIST), Japan

Your team achieved the highest performance on Task 4 of the COLIEE Competition.
Sincere thanks for your contribution to the growing community of research scholars who have invested their energy and talent into pushing the boundaries of research and its application to Juris-Informatics.

19 June 2023

COLIEE organizers,

Randy Goebel Mi-Young Kim Juliano Rabelo University of Alberta, Canada	Yoshinobu Kano, Shizuoka University, Japan Masaharu Yoshioka, Hokkaido University, Japan	Ken Satoh, National Institute of Informatics (NII), Japan

↑ Excerpt from the paper submitted by the team that won first place in Task 4 (task that involved answering yes/no questions on the Japanese bar exam) and other tasks at COLIEE2023 (Bui et al. (2023), "JNLP @COLIEE-2023: Data Augmentation and Large Language Model for Legal Case Retrieval and Entailment", http://research.nii.ac.jp/~ksatoh/COLIEE2023proceedings.pdf)

← Certificate awarded to the team (https://www.jaist.ac.jp/whatsnew/award/2023/06/27-1.html)

Laws are highly important, and therefore they must be appropriately revised in a timely manner

Example: review of analog regulations

The Digital Extraordinary Administrative Advisory Committee (secretariat: Digital Agency) was first convened in November 2021 to inspect laws, focusing on “7 analog regulations,” and “regulations that specify recording media such as FDs,” etc. As a result, a review policy was finalized for approximately 10,000 law provisions (December 2022).

According to the “Economic Impact of the Revision of Analog Regulations (Interim Report) Estimates based on a survey commissioned by the Digital Agency to Mitsubishi Research Institute, Inc.” (August 2023), an approximately **2.9 trillion yen** cost reduction impact, an approximately **0.9 trillion yen** market expansion impact and an approximately **3.6 trillion yen** (about 0.64% of nominal GDP + 0.64%) GDP impact, can be expected as a result of reviewing analogue regulations. (Figures may change as a result of future scrutiny)

アナログ規制に関する点検･見直しの現状

「7項目のアナログ規制」及び「FD等の記録媒体を指定する規制」等に関する法令**約1万条項**全ての見直し方針及び見直しに向けた工程表が確定

・目視………………… 2927条項
・実地監査…………　74条項
・対面講習…………　217条項
・往訪閲覧・縦覧… 1446条項
・その他の規制………　42条項
・定期検査・点検… 1034条項
・常駐・専任……… 1062条項
・書面掲示…………　772条項
・FD等記録媒体……2095条項

合計　9669条項（100%）全ての方針及び工程表確定

《工程表のイメージ》

○方針確定している約１万条項の一覧（抜粋）

法令名	所管省庁名	条項	規制等の内容概要	規制等の類型	現在 Phase	見直後 Phase	見直し完了時期	工程表	見直しの概要
河川法施行令	国土交通省	第9条の3第1項第2号	河川管理施設等の維持又は修繕に関する技術的基準等	目視規制	1-②	3	令和４年度 １月～３月	目視－共通１	告示、通知・通達等の発出又は改正
指定居宅サービス等の事業の人員、設備及び運営に関する基準	厚生労働省	第6条第1項	指定訪問介護事業所における管理者の常駐	常駐専任	1-3	2-3	令和５年度 ４月～９月	常駐専任－厚生労働省２	告示、通知・通達等の発出又は改正

○工程表の類型

	令和４年度	令和５年度		令和６年度
	１月～３月	４月～９月	10月～３月	４月～６月
目視ー共通１	法令等改正手続			
常駐専任ー厚生労働省２	実態把握（外部委託調査等）			
	対外調整等	対外調整等		
	法令等改正手続	法令等改正手続		

見直しに向けた工程表

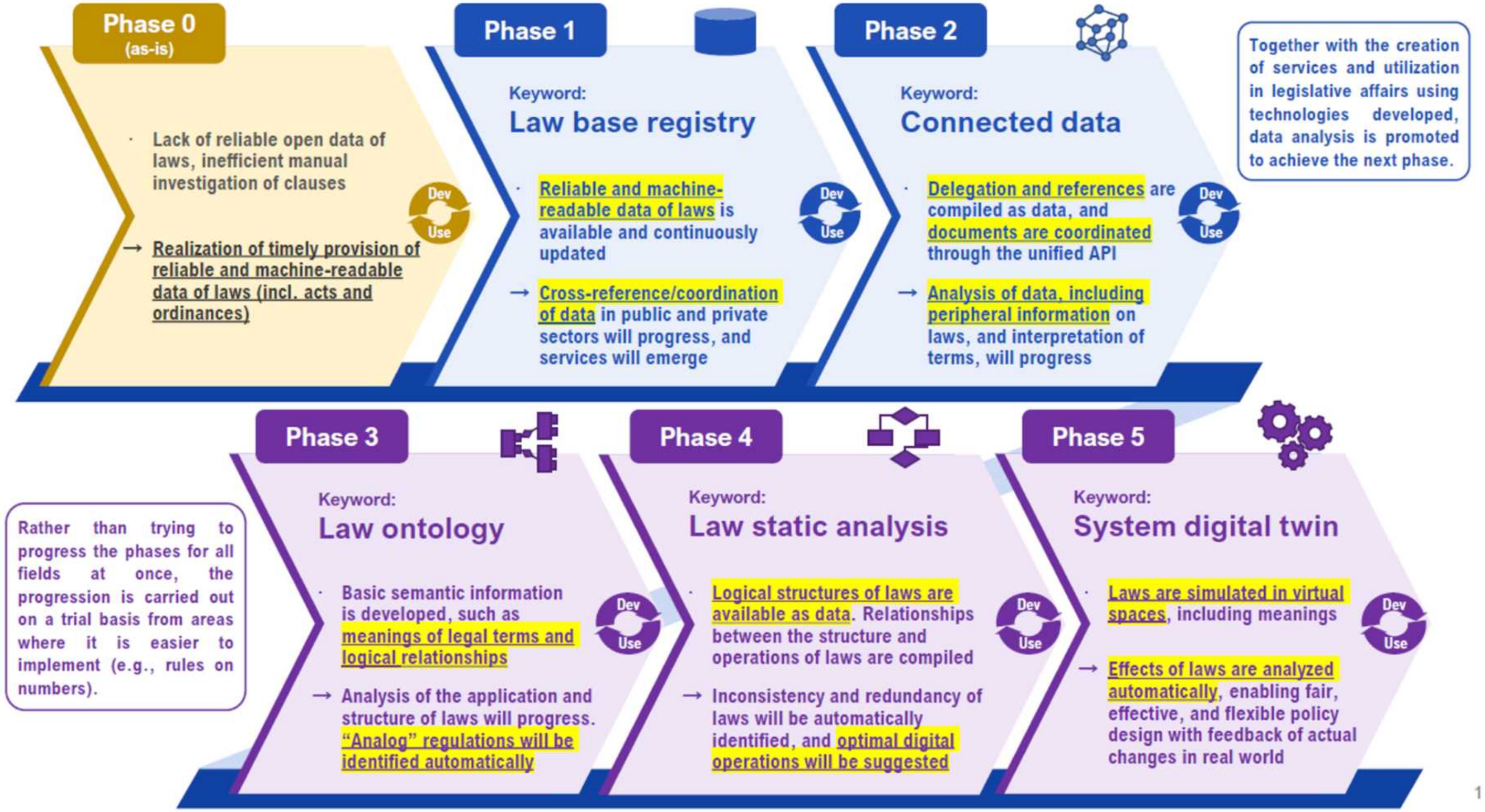
※ 経済界からの主要な要望についても工程を確定
※ 地方公共団体（福岡市）からの要望についても工程を確定予定

Source: Digital Extraordinary Administrative Advisory Committee (sixth meeting), December 21, 2022, Document 1

Digital Legislation Roadmap (future vision for discussion)

Aiming for fair, just, and effective policymaking

The "Digital Legislation Roadmap," proposed by the Digital Agency, aims to combine and propel the progress of research and development in AI and other technologies, and the continuous advancement of service development, infrastructure maintenance and institutional developments.



(Partially revised based on Document 2, Working Team on Digitalization of Legislative Affairs (seventh meeting), November 9, 2022)

Laws x digital initiatives and outlook

- **Laws are programs that describe society's rules.** Laws are the foundation of society, and relate to economic activities, rights and obligations.
- Legislative affairs supporting laws rely on visual and manual work. Efforts are underway to **utilize digital technology, including AI.**
- The public expects the development of services with high social value that **utilize data of and legal tech**.
- Currently researching the advancement of fair, just, and effective policymaking in the future by **simulating laws.**

See the latest information on law x digital initiatives (Japanese only)
https://www.digital.go.jp/policies/legal-practice

We are looking for engineers and AI personnel, etc. to work with us at the Digital Agency (Japanese only)
https://www.digital.go.jp/recruitment

We would like to hear your feedback on the API for laws and law data and about any works you have created →

#Law_data **#API_for_laws**