



18 December  
2023



# Drafting legislation in the era of AI and digitisation – @EU an update

---

On Law bits and Text bites

**interoperable**  
europe



## Global trends in Government Innovation 2023 (see OECD)

- New forms of accountability for a new era of government
- New ways of engaging citizens and residents
- Public administration transformation
- Strengthening and leveraging GovTech ecosystems



## European Commission digital strategy - Next generation digital Commission

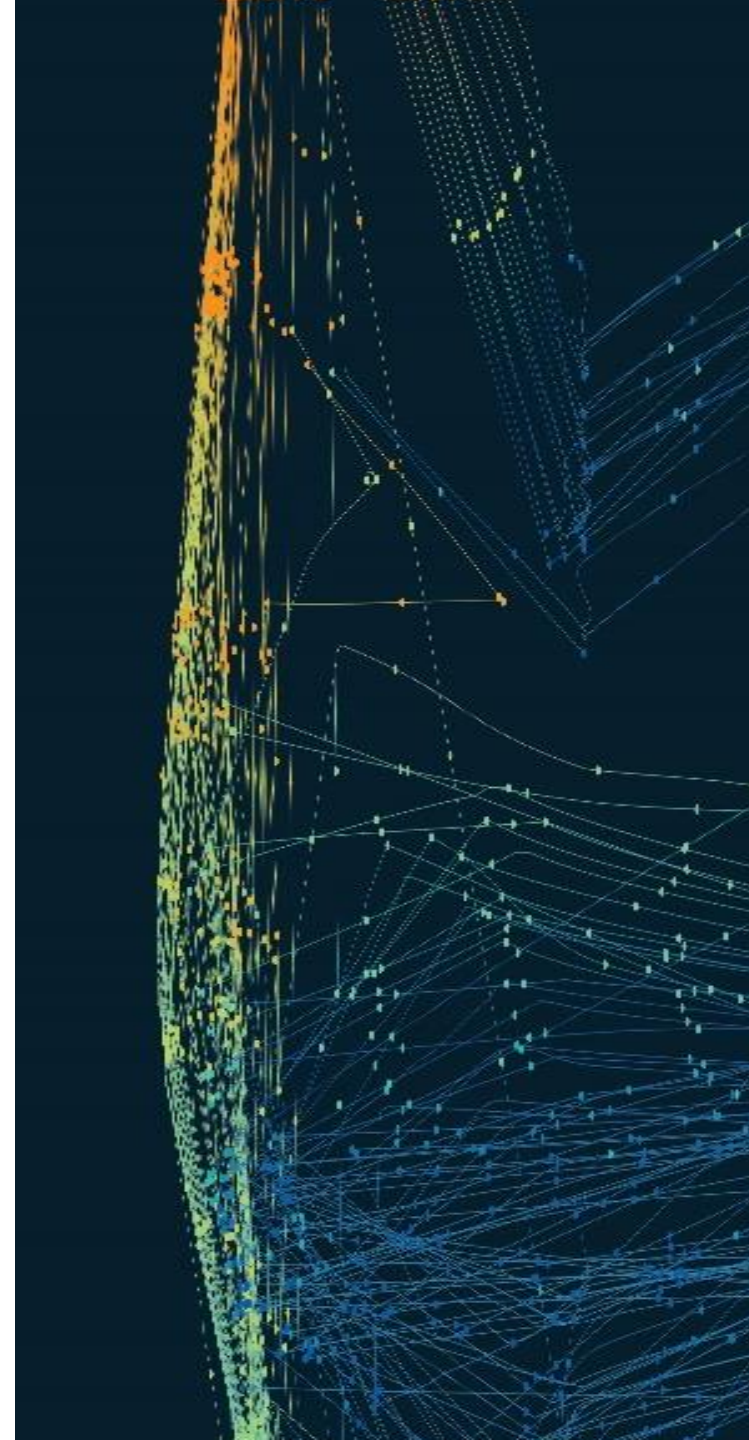
‘Achieving the mission of a public institution in a digital society requires more than an IT strategy to digitise and automate. It requires an improvement in the institution’s digital culture and business operations by optimising its processes, streamlining and automating workflows, and using digital technologies to increase productivity.’

1

# Law Making and Policy Development – Focus on EU



Observations  
Imperatives  
Enablers



2

## LEOS - a flagship initiative

Core of an eco-system  
Legal Editing Open Source  
Progress, ongoing and planned

3

## Innovate – a conditio sine qua non

Beyond editing  
Explore AI



4

## Conclusions

Use - LEOS is a robust tested legal drafting solution  
Cooperate – open community, open source  
Innovate – share experiences





# Law Making and Policy Development - Focus on EU



Observations  
Imperatives  
Enablers



## Law making and Policy Development @EU Observations



Law is not developed in a vacuum, law-making is a complex inclusive process



Cover full lifecycle, to be implemented for the benefit of society, business and citizen



Teams of people of various profession in a collaborative manner draft law/develop policy



Intertwining of drafting/revising of law and decision making



Interoperability and cooperation between EU Institutions and with Member States



Multi-lingual, many artefacts, the 'sheer volume of work', and the necessity to 'deliver in no-time'

# Law Making and Policy Development @EU

## *Imperatives*

---

01

### **Political**

Continuously improve law (quality, transparency) and the law-making process (efficiencies, efficacy)

02

### **Technology**

Embrace technology and the need to innovation

03

### **User centricity**

Put technology at the service (and àt the control) of the user

04

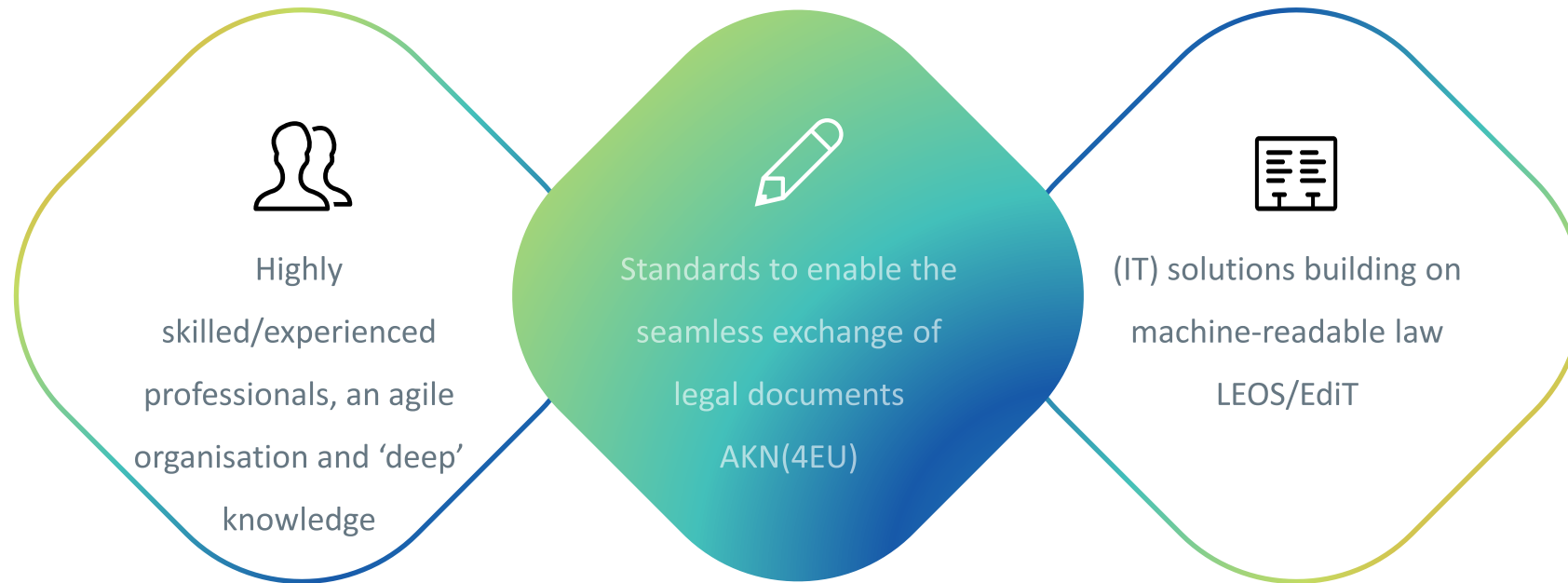
### **Autonomy**

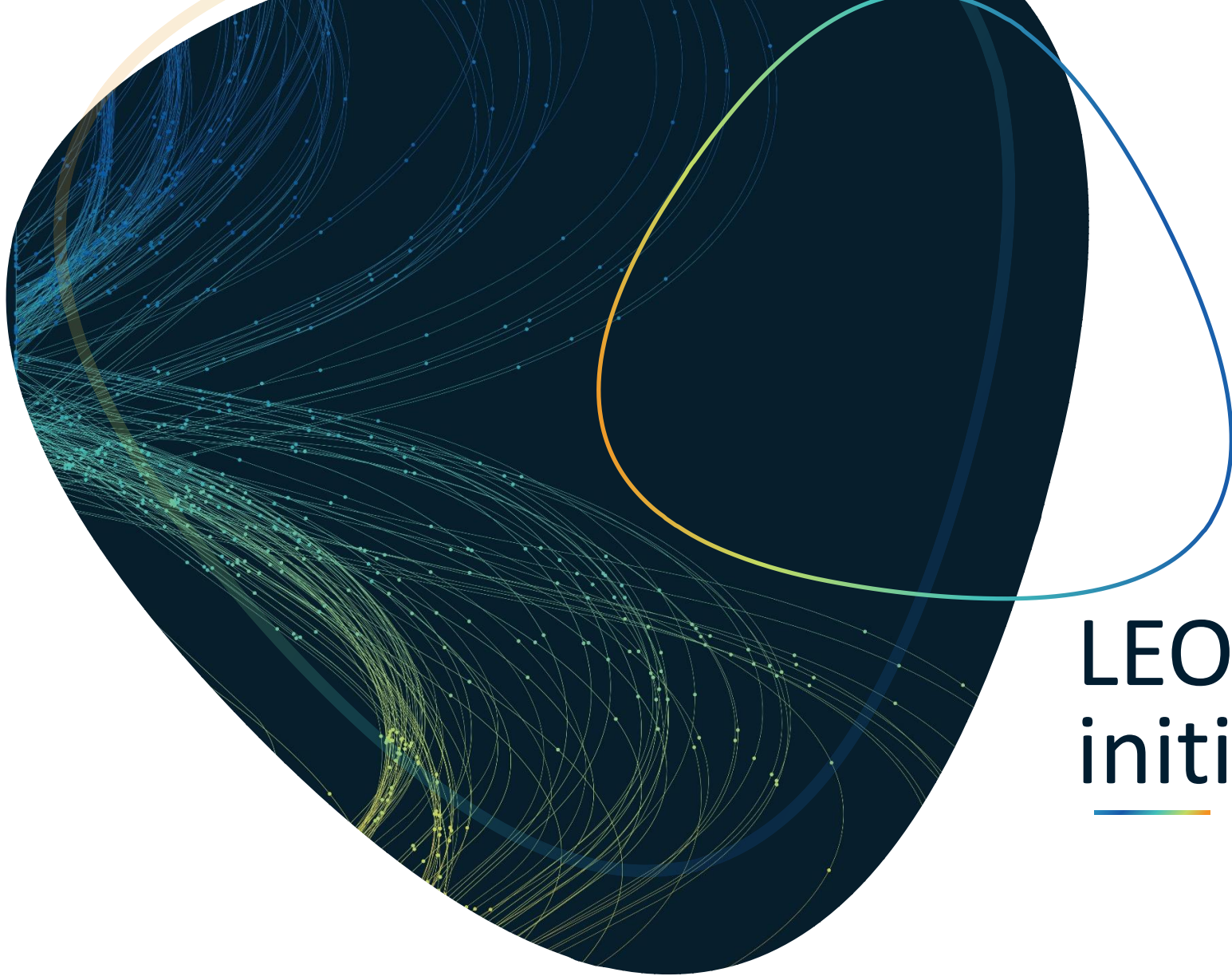
Capability and capacity to decide and implement solutions



# Law Making and Policy Development @EU

## Enablers – existing and to be nurtured





LEOS – a flagship  
initiative



**Resources, Commitment,  
Multi-disciplinarity, ...**

**Digital Space  
of a Legal Act**



**LEOS at the core of an  
eco-system**

**Decision  
workflow  
system**

**Technology  
including AI,  
ML, LLM,  
semantic  
technologies, ...**

**Standards –  
Legal  
interoperability**

**Digital Acquis**

# LEOS currently offers

01

Manage the complexity of drafting legislation and developing policies.

02

Teamwork through efficient online collaboration.

03

A solution to allow a drafter to concentrate on substance.

04

Step towards a single data space that contains all information on a given act.

05

Provide a seamless interaction between drafting of legislation and decision-making workflows, to reduce inter alia manual interventions in the process.

06

Aims to cover the full lifecycle, initially the focus is on translation (multi-lingualism) and publication (accessibility to stakeholders).

# LEOS

## Progress/ongoing/planned developments – an excerpt

---

01

### **A more complete performant editing solution**

Track changes  
Complex tables, footnotes, mathematical formulas, ...  
Mobile LEOS -  
'Any' device

02

### **Interoperable**

Rich set of API's  
Support AKN4EU 4.1  
'Any' workflow

03

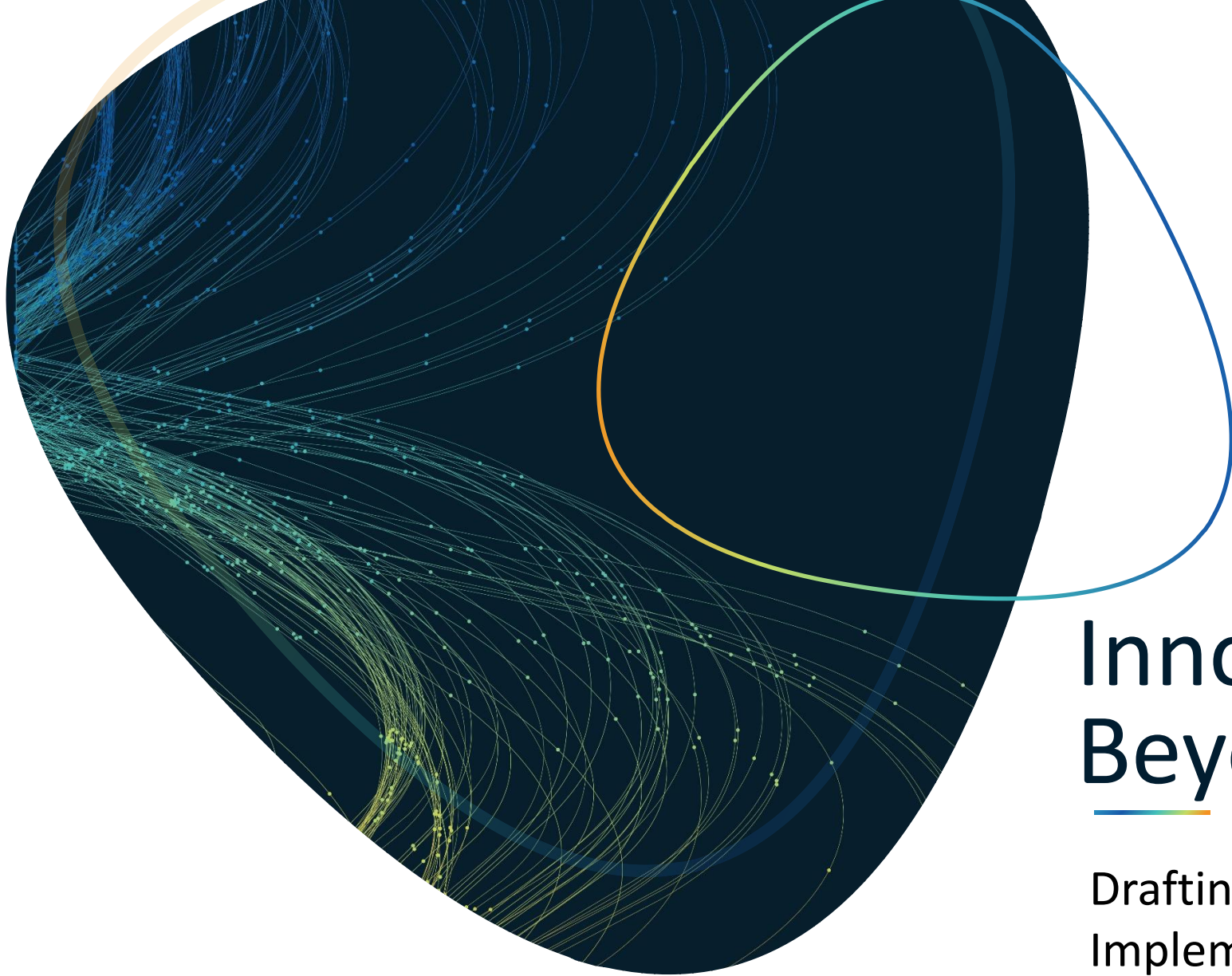
### **Configurable**

Template management  
'Any' law

04

### **Multi-lingual**

Spell and grammar checker  
Multi-lingual LEOS  
'Any' language



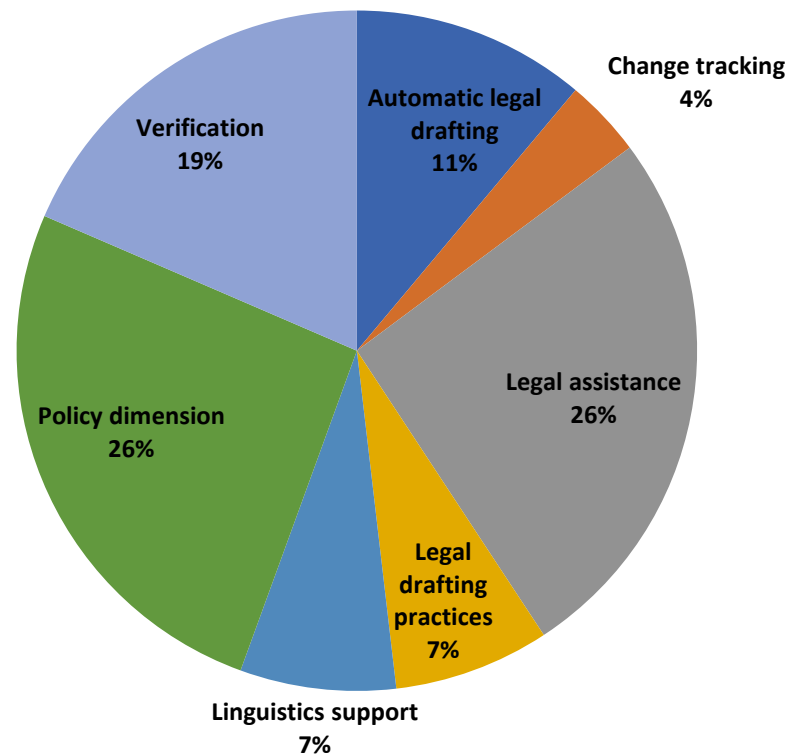
# Innovate Beyond editing

Drafting – smart functionalities

Implementation – digital ready policies

# A bridge between editing and legal drafting

## Smart functionalities



## Considerations

- Secondary legislation
- 'Complementary' documents
- Amendments
- ...
- Build trust
- Data protection
- Water marking
- ....

## Develop a roadmap

# A bridge between editing and legal drafting

## Smart functionalities

### Ongoing projects

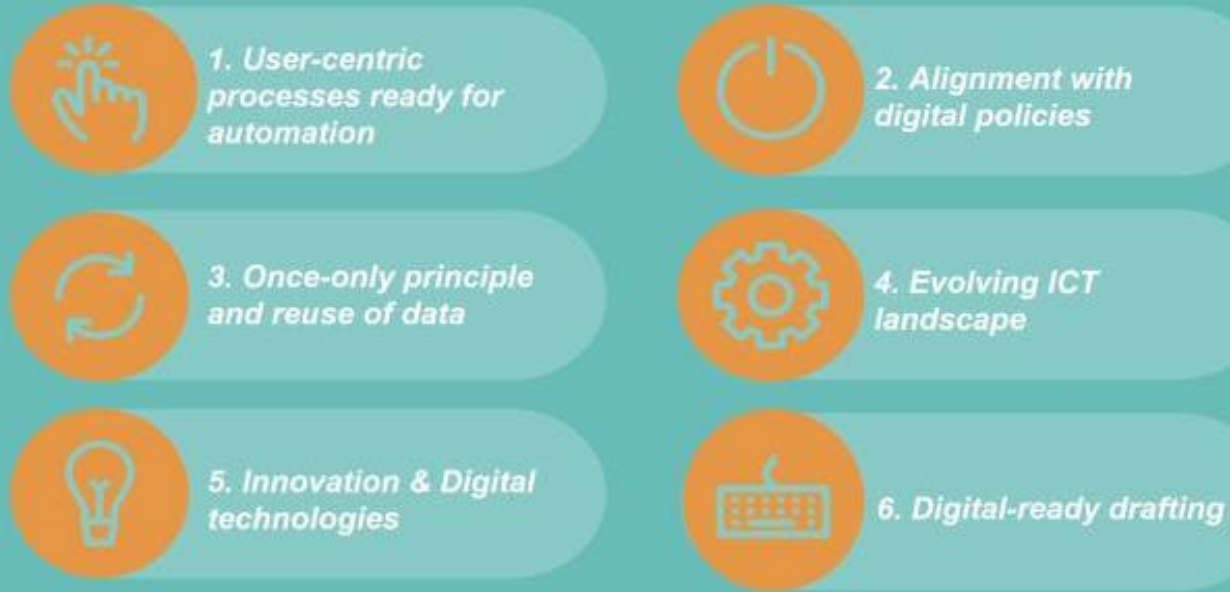
- **Experiment** - Large Language Models, including prompt engineering
  - AI-assisted editing
  - eBriefing
- **Scale** - Hybrid AI, Proof of Concepts
  - Autocomplete of normative references and checking of consistency
  - Suggestions of definitions
  - Suggest preamble and recitals
- **Deploy** - Vocabularies and ontologies
  - Reporting requirements



# A bridge between drafting and implementation

## Digital-ready policies

### Components and enabler

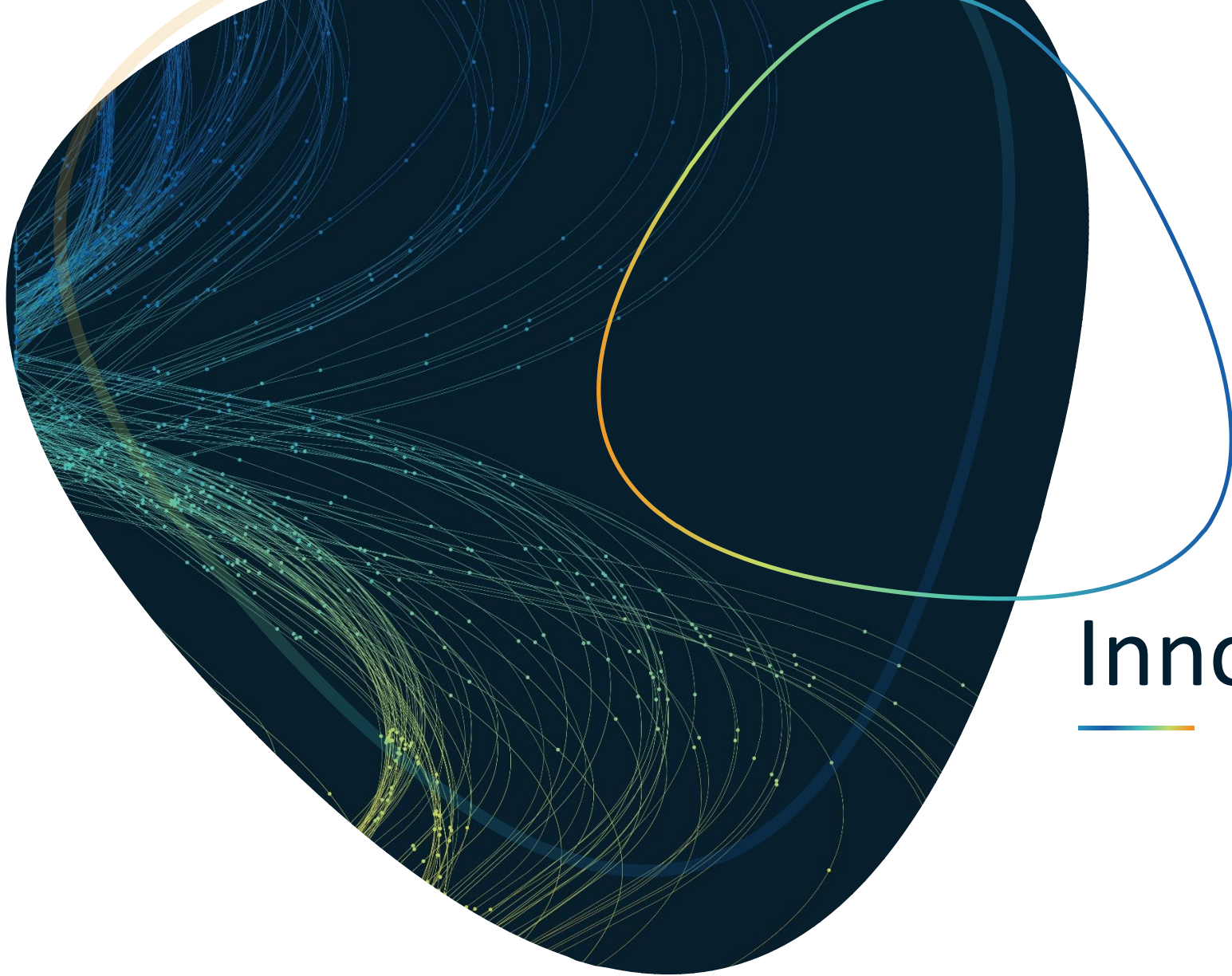


### Other approaches

- Code as Law, Code as Rules
- Algorithmic law
- No-code/low-code
- Specific programming languages
- Proof systems
- ...

### Specificities

- Transposition of law
- Interoperability
- ...



Innovate - Explore





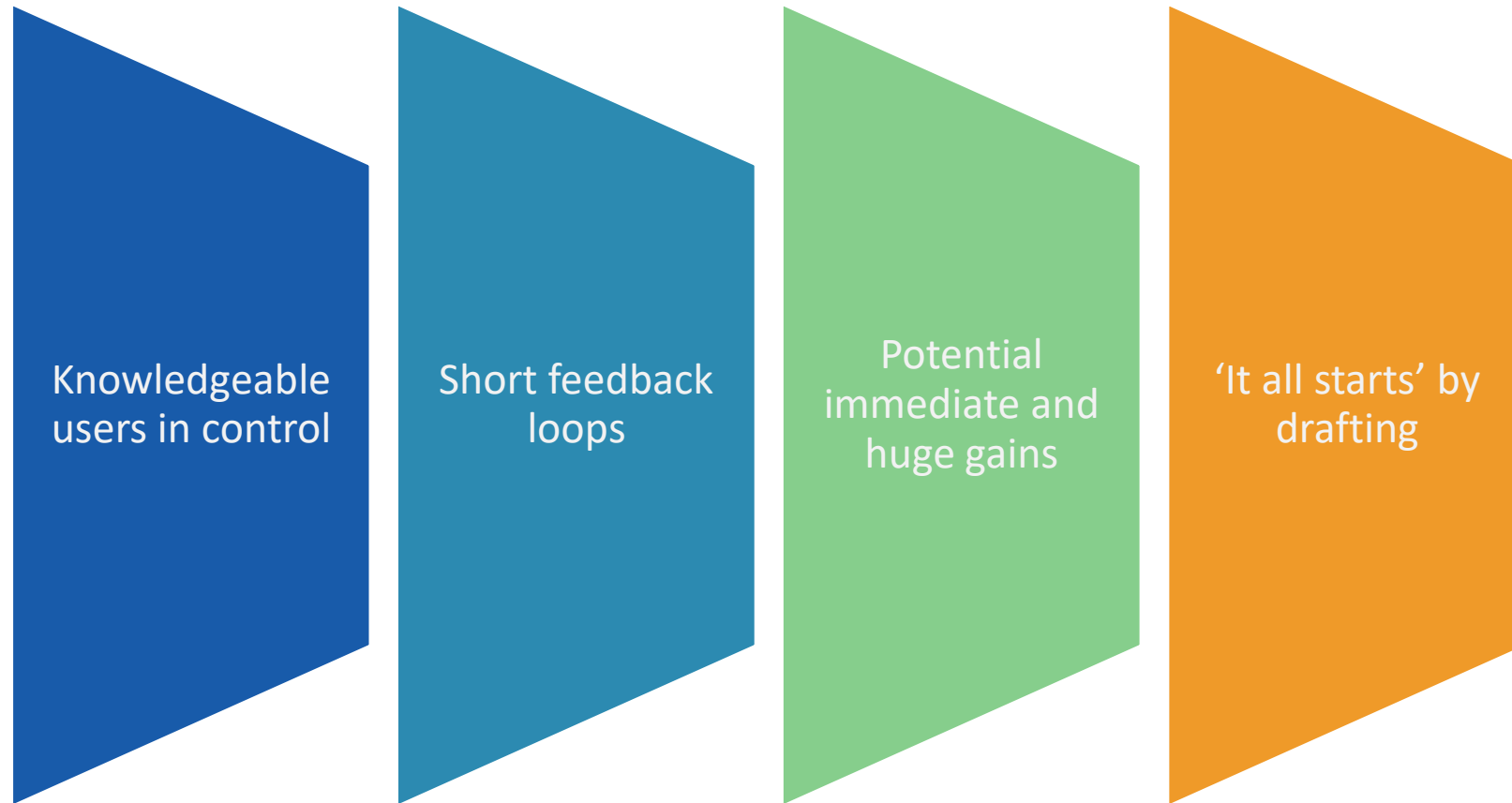
**Innovate**

**Drafting is an excellent use case to experiment the use of AI**

**The need for agile guidance on the responsible use of AI**

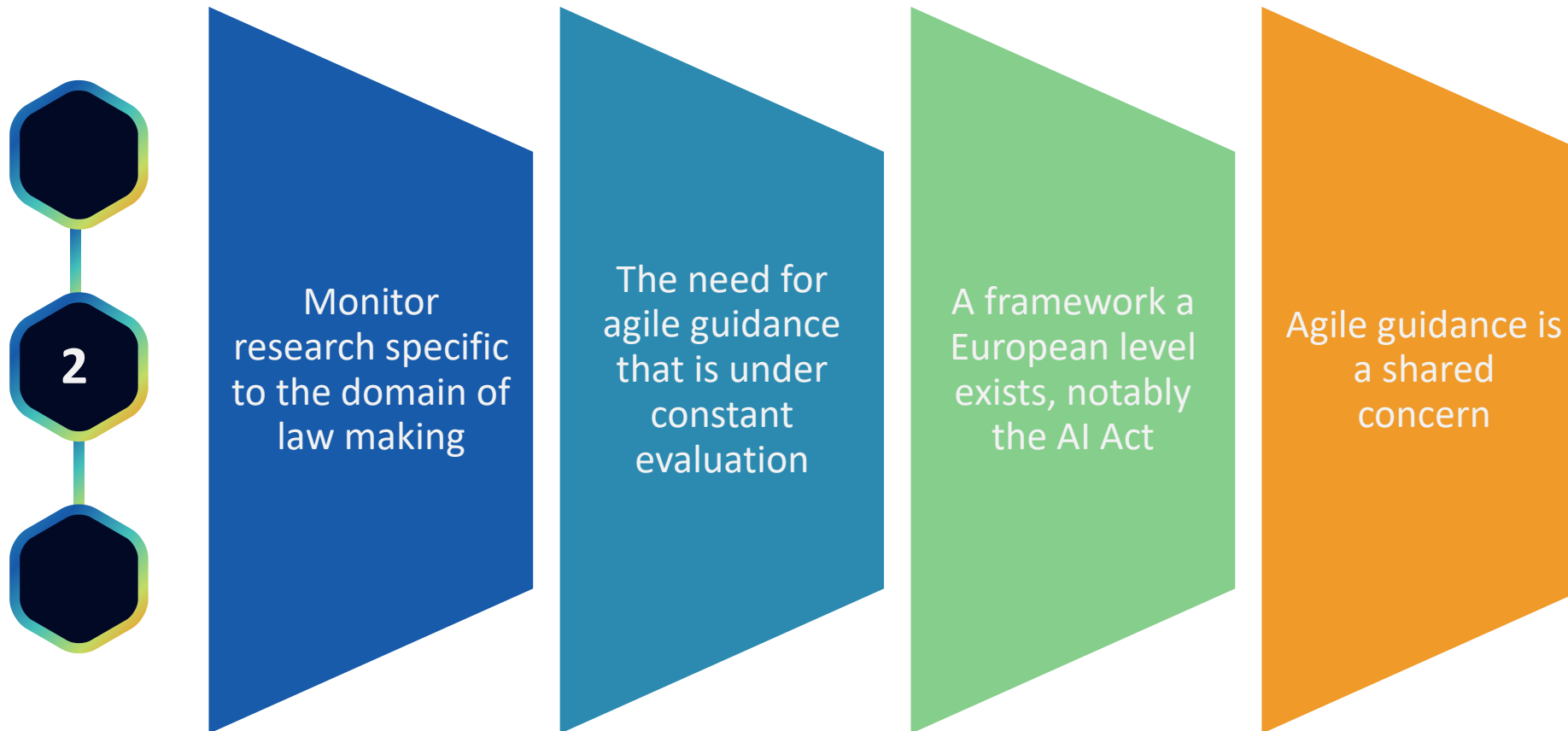
**The need to experiment AI in the public sector**

# Drafting is an excellent use case to test the use of AI, and Large Language Models



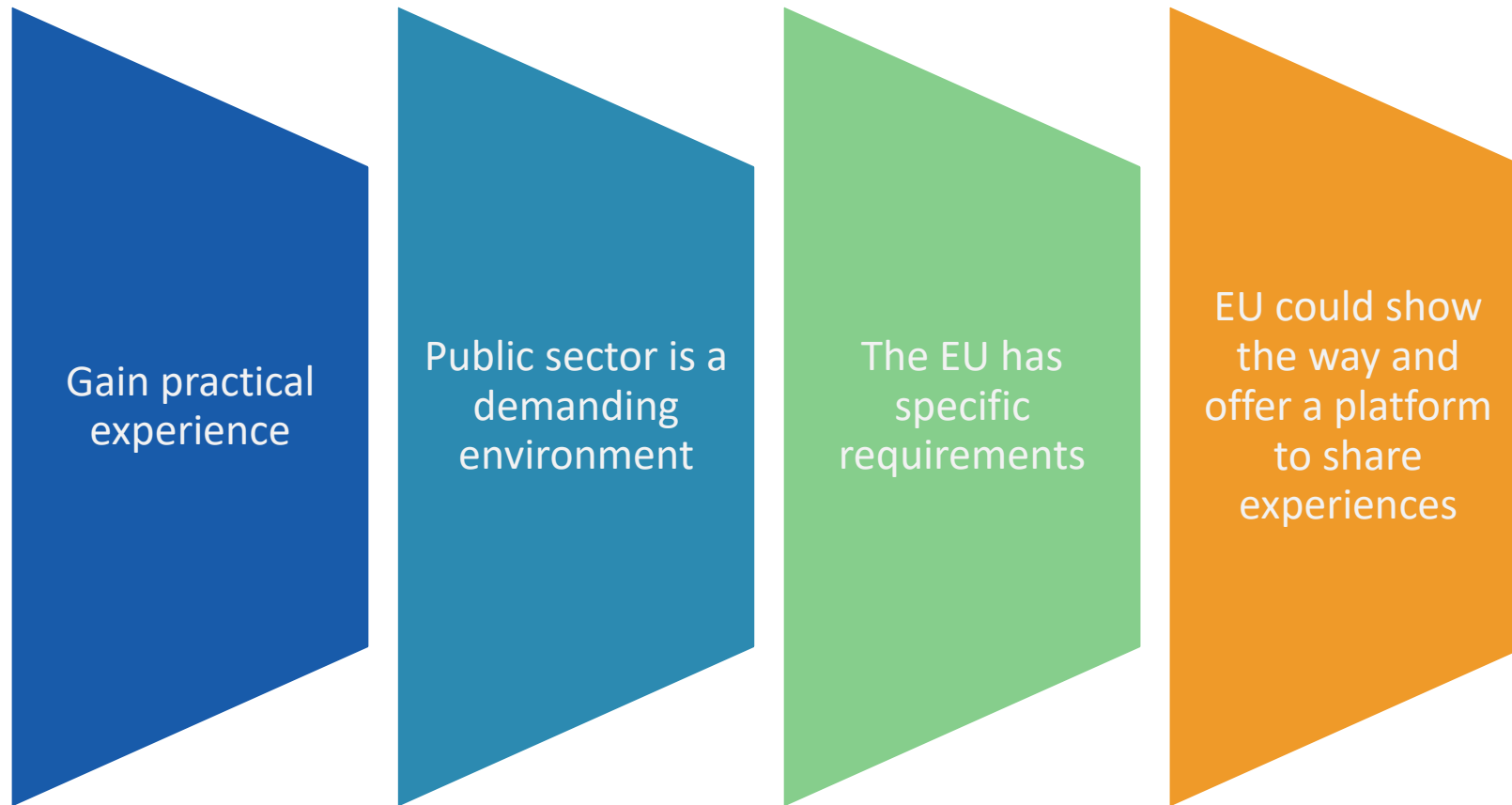
LEOS provides a unique platform to introduce AI induced innovation

# The need for agile guidance on responsible use of AI

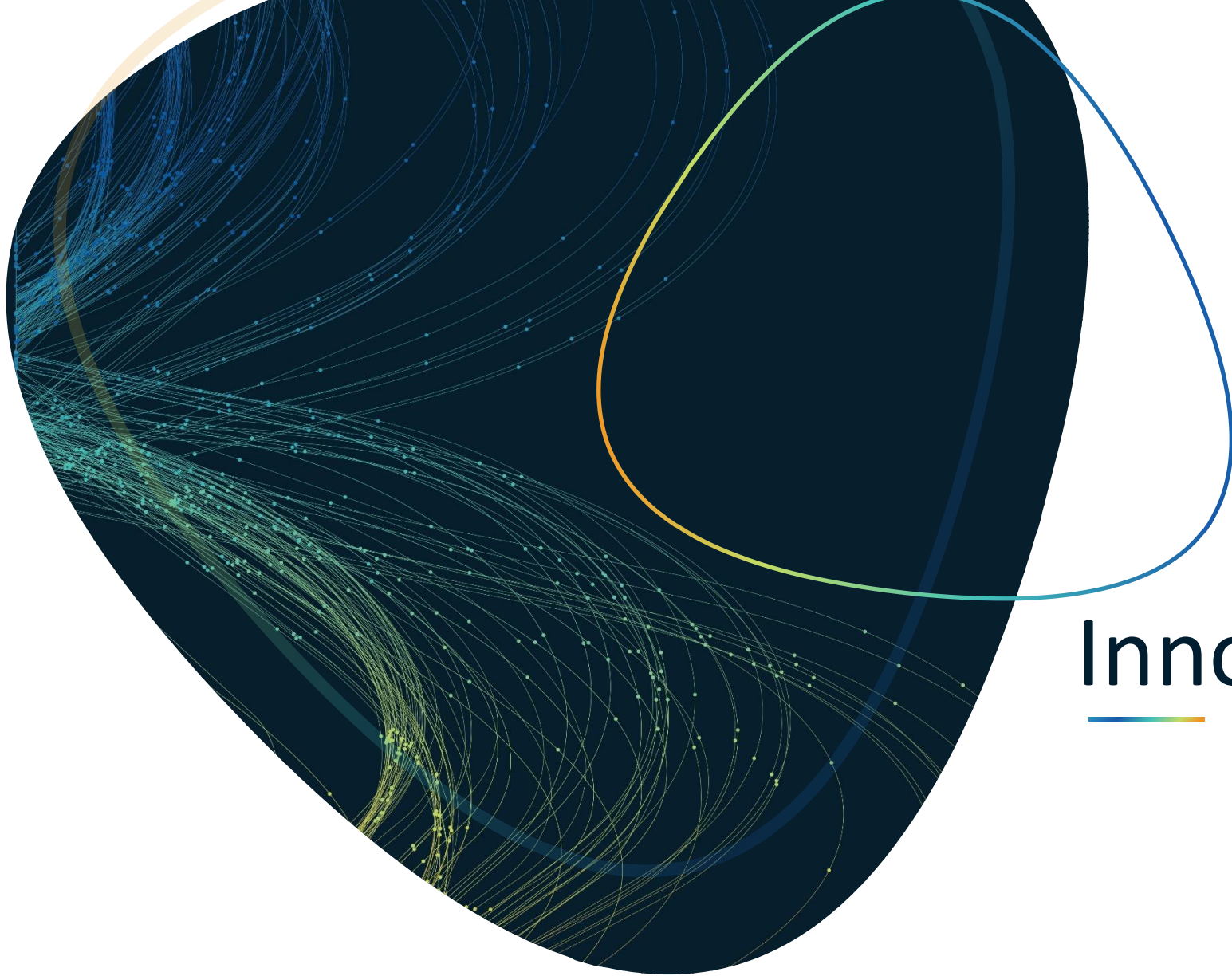


Use LEOS to contribute to capture experience

## Need to experiment with AI in a public sector setting



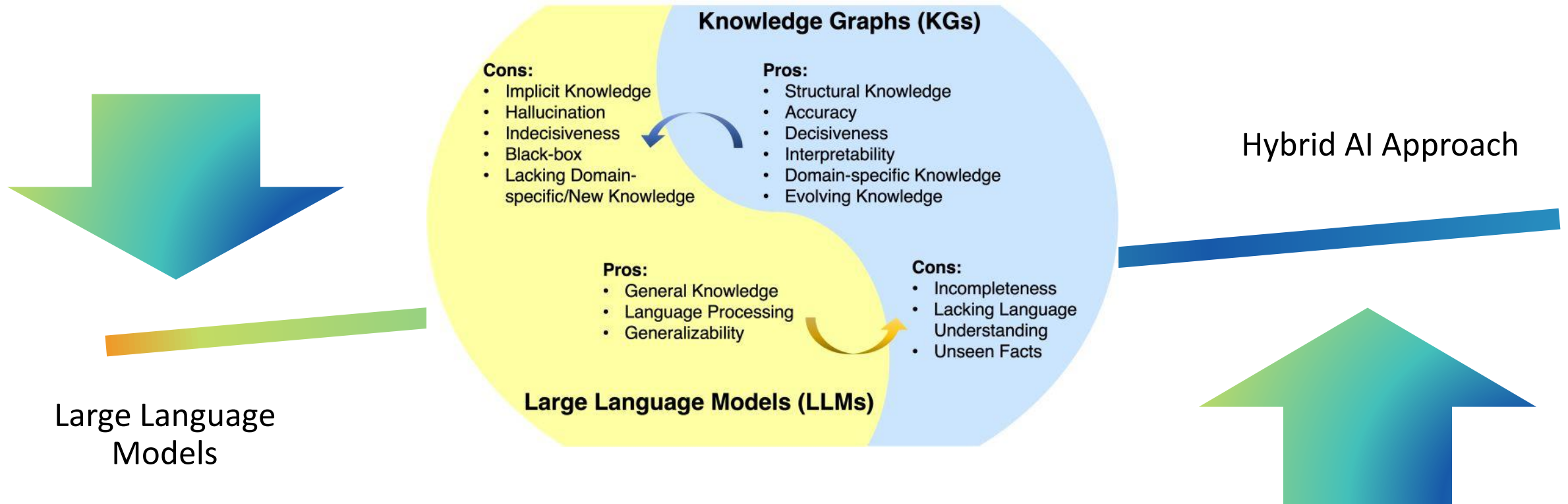
LEOS is an open-source solution for cooperation on drafting



Innovate – AI



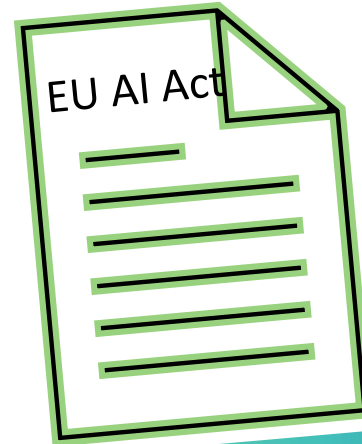
# A Balancing Act? Law bits versus text bites



Unifying Large Language Models and Knowledge Graphs: A Roadmap  
[Shirui Pan](#), [Linhao Luo](#), [Yufei Wang](#), [Chen Chen](#), [Jiapu Wang](#), [Xindong Wu](#)



# A Balanced Act!



Innovation



Regulation

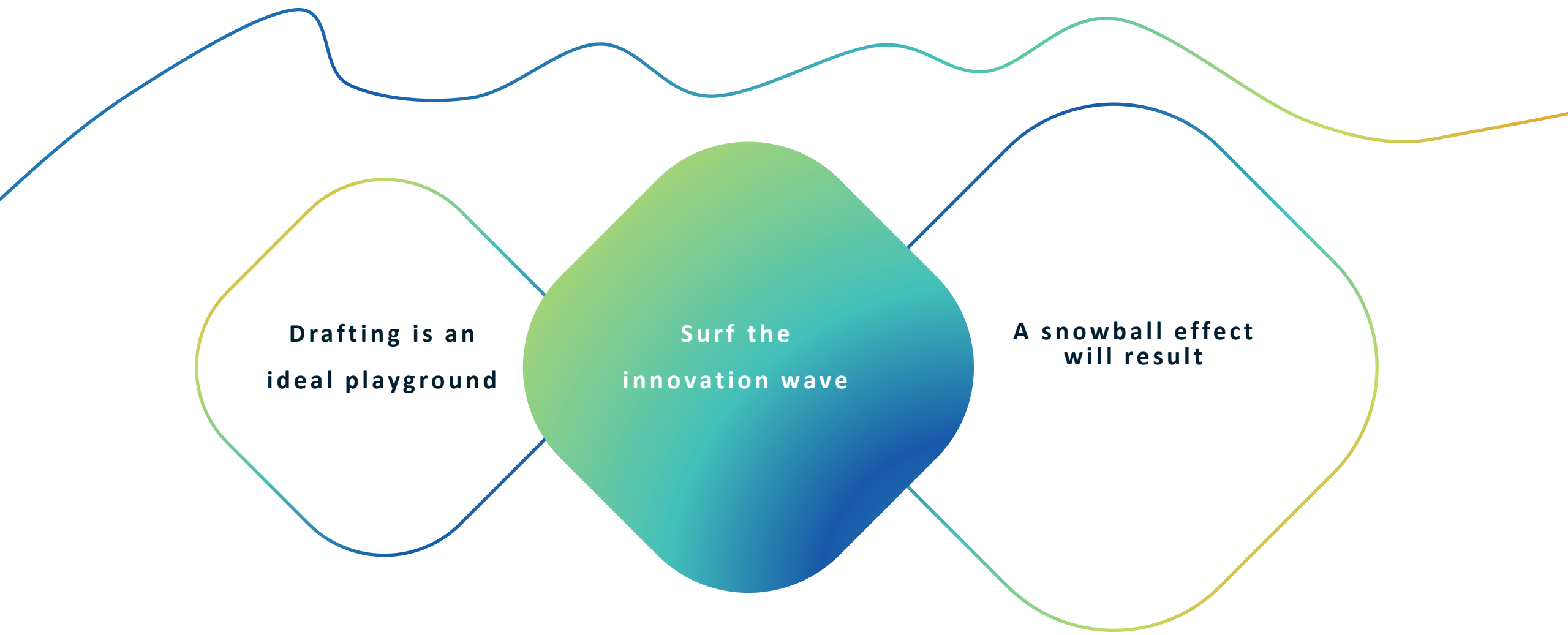


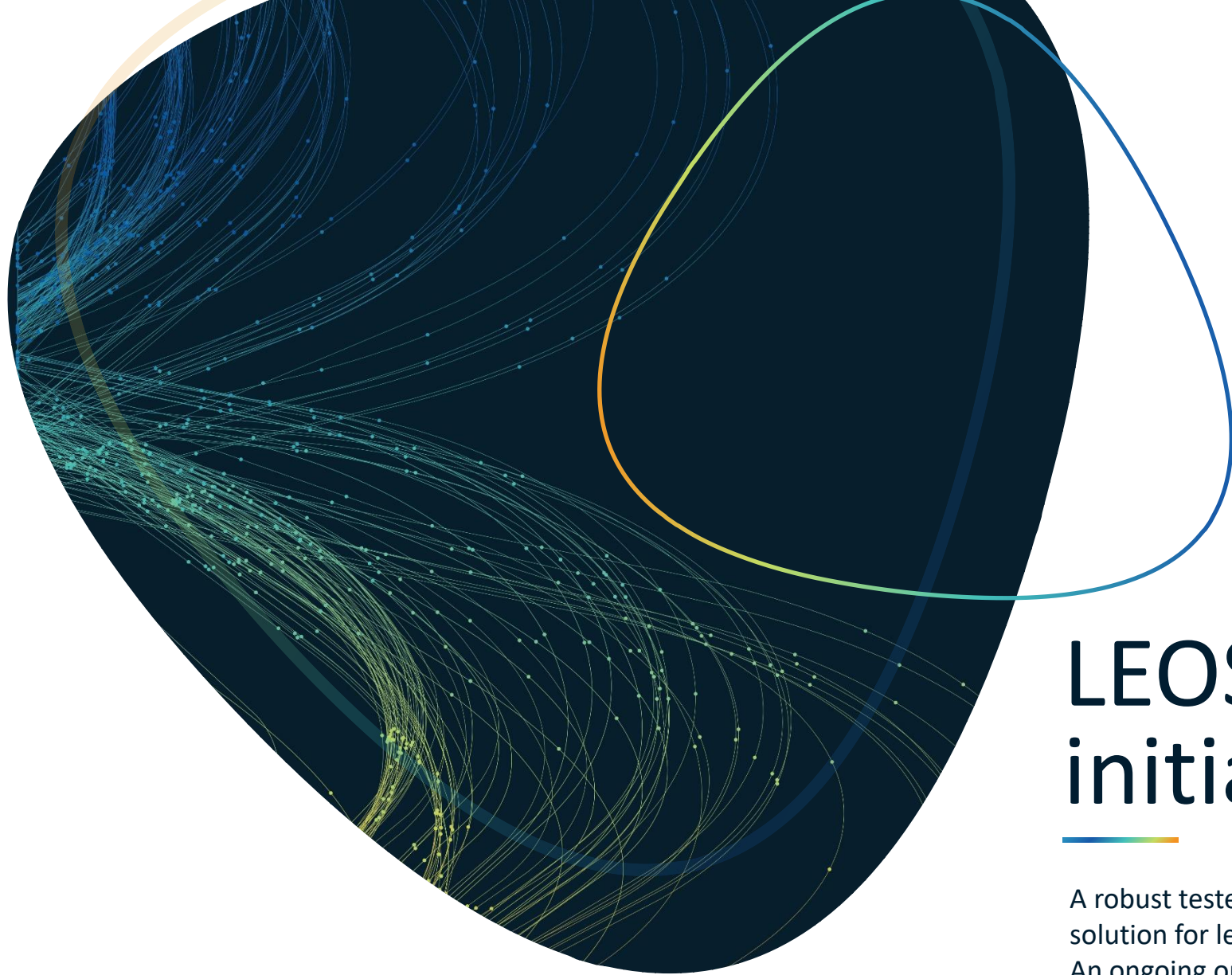
# Conclusions

**Drafting is an  
ideal playground**

**Surf the  
innovation wave**

**A snowball effect  
will result**





# LEOS – a flagship initiative

---

A robust tested future-proof flexible and easy to integrate solution for legal drafting

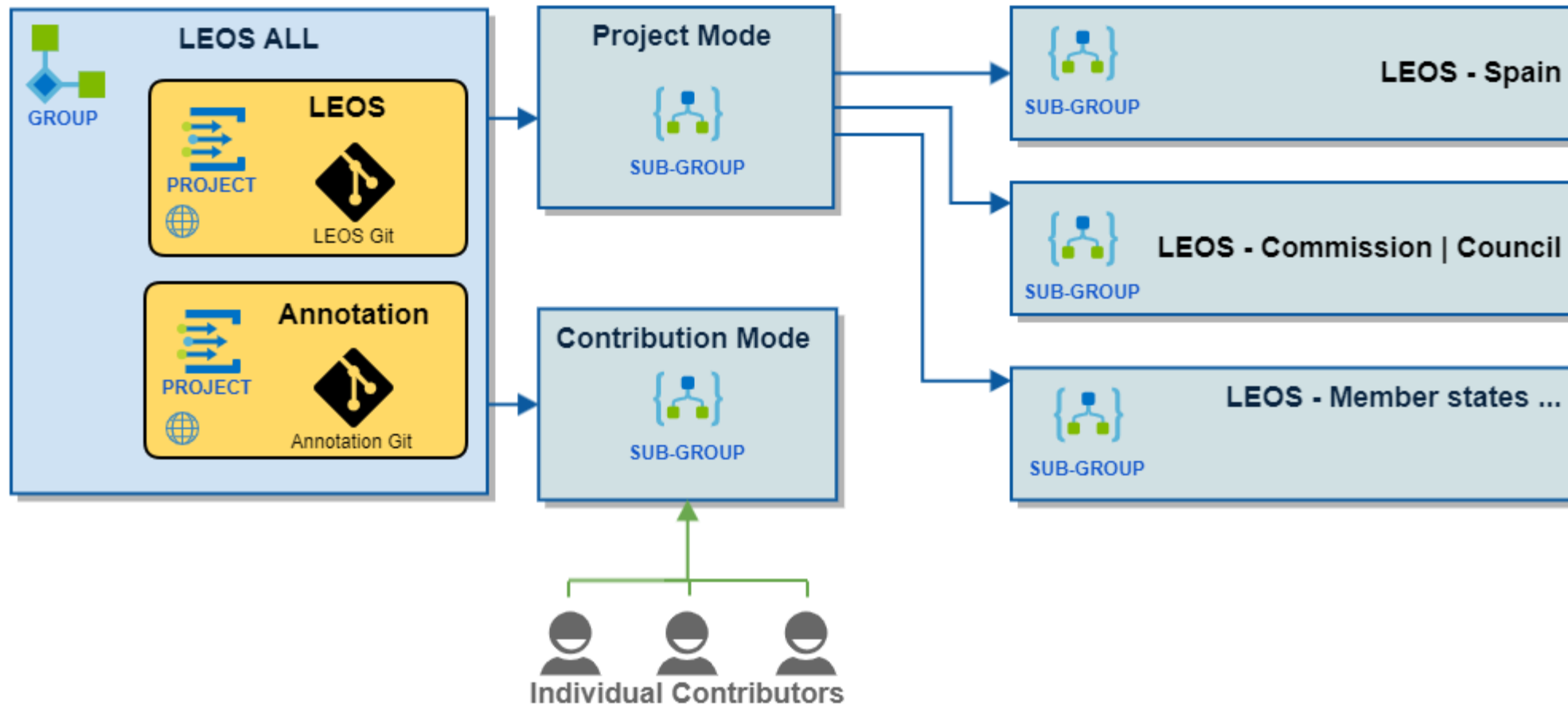
An ongoing open-source development project

An emerging 'LegalTech' community

A substantial investment on offer based on a EUPL

An innovation platform

# Cooperate





**Innovate**

Clear  
purpose

Willingness  
to explore  
novel  
avenues

Commitment  
to build and  
deploy  
capacity

A correct  
appreciation  
of the  
potential of  
technology



LEOS powered by  
**interoperable**  
europe  
innovation ∞ govtech ∞ community

Stay in touch



[\(@InteroperableEU\) /](#)

[Interoperable Europe - YouTube](#)



[Interoperable Europe | LinkedIn](#)



[DIGIT-LEOS-FEEDBACK@ec.europa.eu](mailto:DIGIT-LEOS-FEEDBACK@ec.europa.eu)

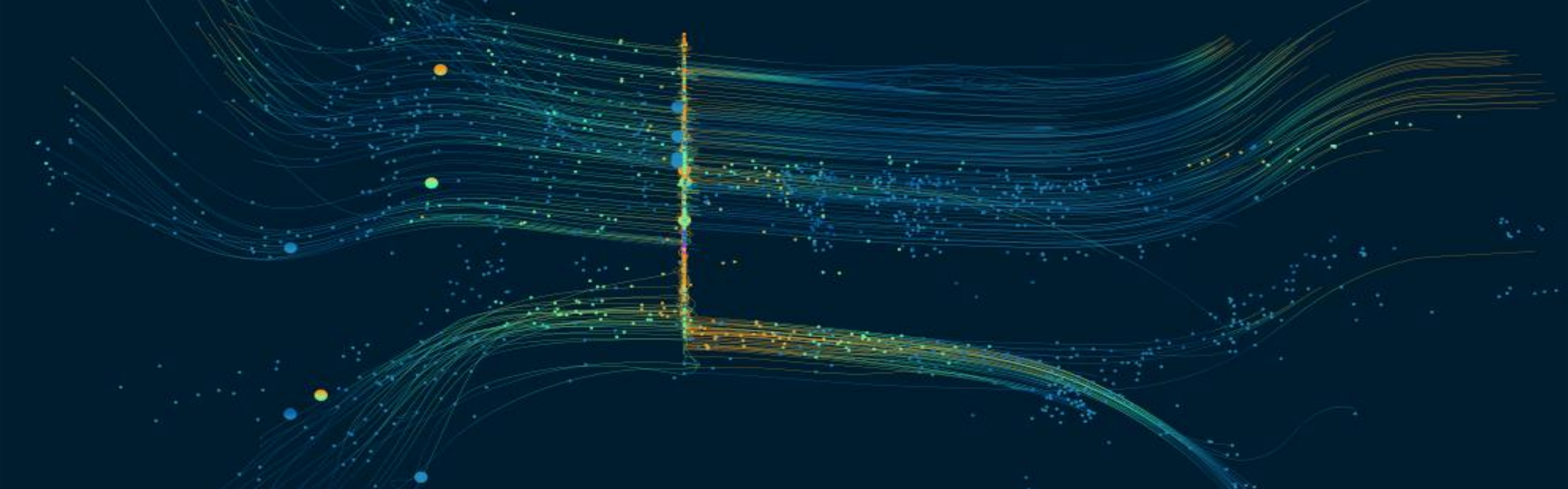


[Newsletter subscription](#)



[code.europa.eu](http://code.europa.eu)

[Joinup](#)



- © European Union 2023
- Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.