

REUTERS/Ina Fassbender

Legal IR & NLP Tutorial – Industry Perspective

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6 April 2023



OUTLINE

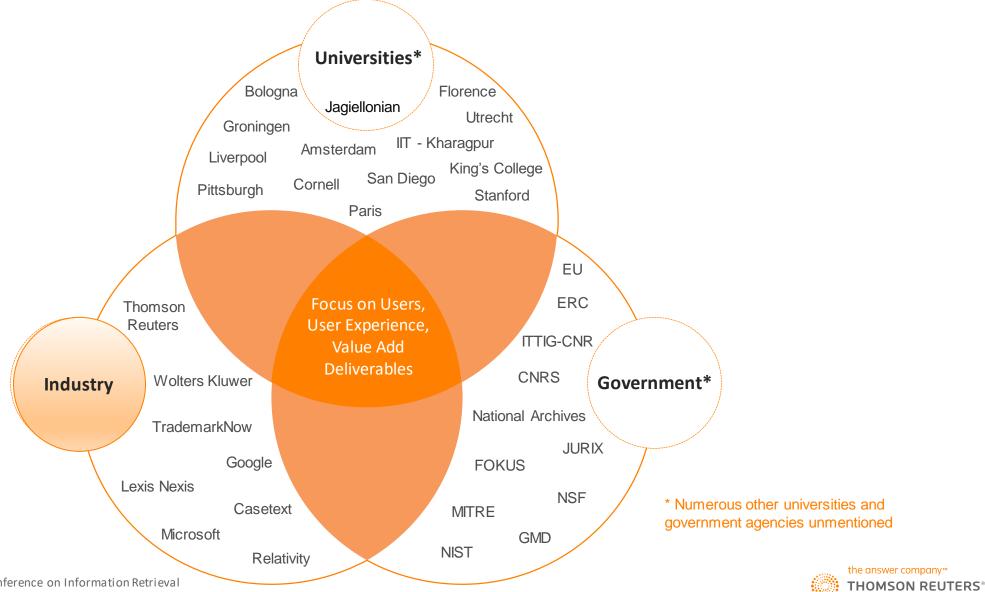
- Where Industry resides
 - w.r.t. academic and government research
- Lawyers as knowledge workers
 - Three-stage model
- Industry's added CODB requirements*
 - End-to-end workflows
 - Multi-modal approaches

* CODB = Cost of doing business



Where Industry resides and intersects ...

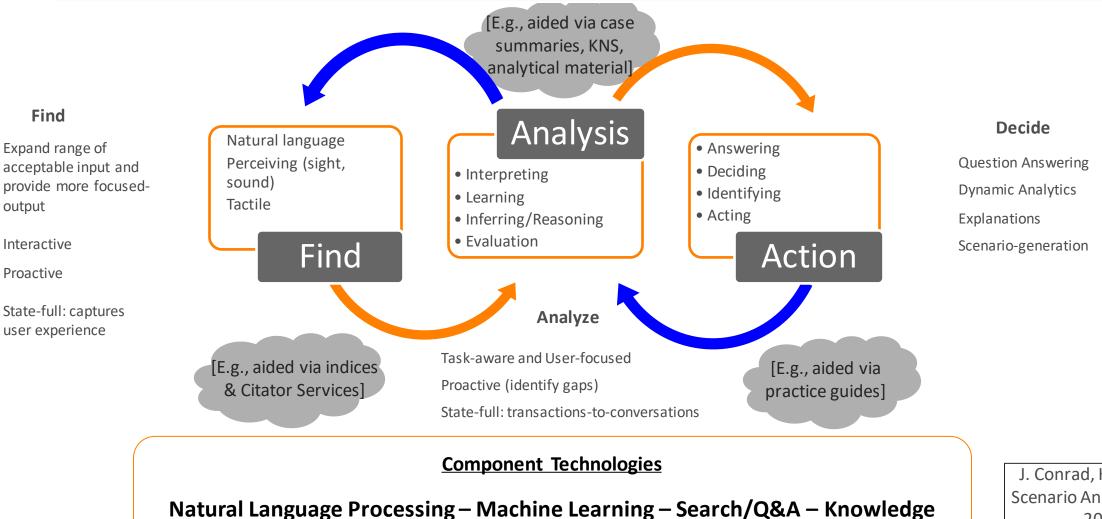
Demographics



Transforming Knowledge Work

Artificial Intelligence is the simulation of human thought processes in a computerized model...

To us AI is about Transforming how professionals find, analyze and decide upon information.



Base – Inference Engines – Deep Learning

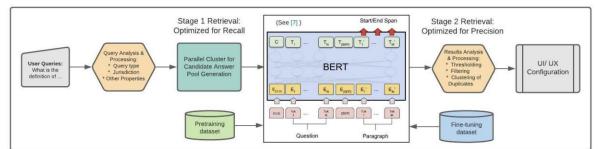
J. Conrad, K. Al-Kofahi, Scenario Analytics, ICAIL 2017.



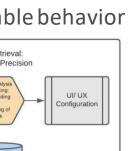
How is an Industry perspective on these fields different?

Industry vs. Academic / Government Research In Industry ...

- A project doesn't end with the publication of successful results. It only just begins there.
- Next steps address
 - user testing, including user experience testing by a UX team
 - establishment of an end-to-end workflow in the production environment
 - and development of the process at scale by an Engineering team
 - maintenance of a logging system to provide quality assurance
 - the recording of every transaction and user interaction to assist with troubleshooting
 - the potential collection of training data for the training of future models
 - creation of an alerting process for when the system output fails to meet acceptable behavior





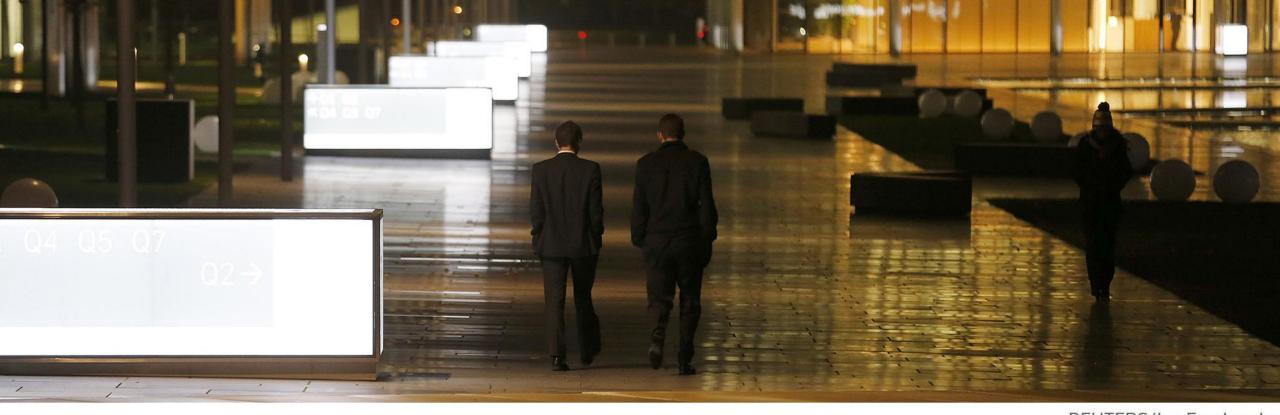




Summary

- Knowledge workers such as lawyers generally pursue a three-stage model
 - Find -- initiated by an information need
 - Analyze, Understand the key dimensions needed to be explored
 - Decide on a course of action, considering alternative scenarios
- Traditionally legal content providers (publishers) focused on the first need (Find)
 - E.g., via powerful search engines like Westlaw, aimed largely at legal researchers
- More recent practice tools relying on NLP, DM, ML are focusing on the latter two (Analyze, Decide)
 - E.g., via analysis platforms like Lex Machina or Westlaw's Litigation Analytics
- Legal research models aside, industry is focusing on transforming knowledge work via powerful AI,
 ML and UX capabilities
 - Approaches need be based not only on <u>content</u>-dependent models, but on <u>user and task-based</u> ones
 - I.e., they should be *multi-modal*
- Effective models are only the beginning in the relationship with users
 - End-to-end workflows, scaled solutions, and on-going model & performance monitoring also essential





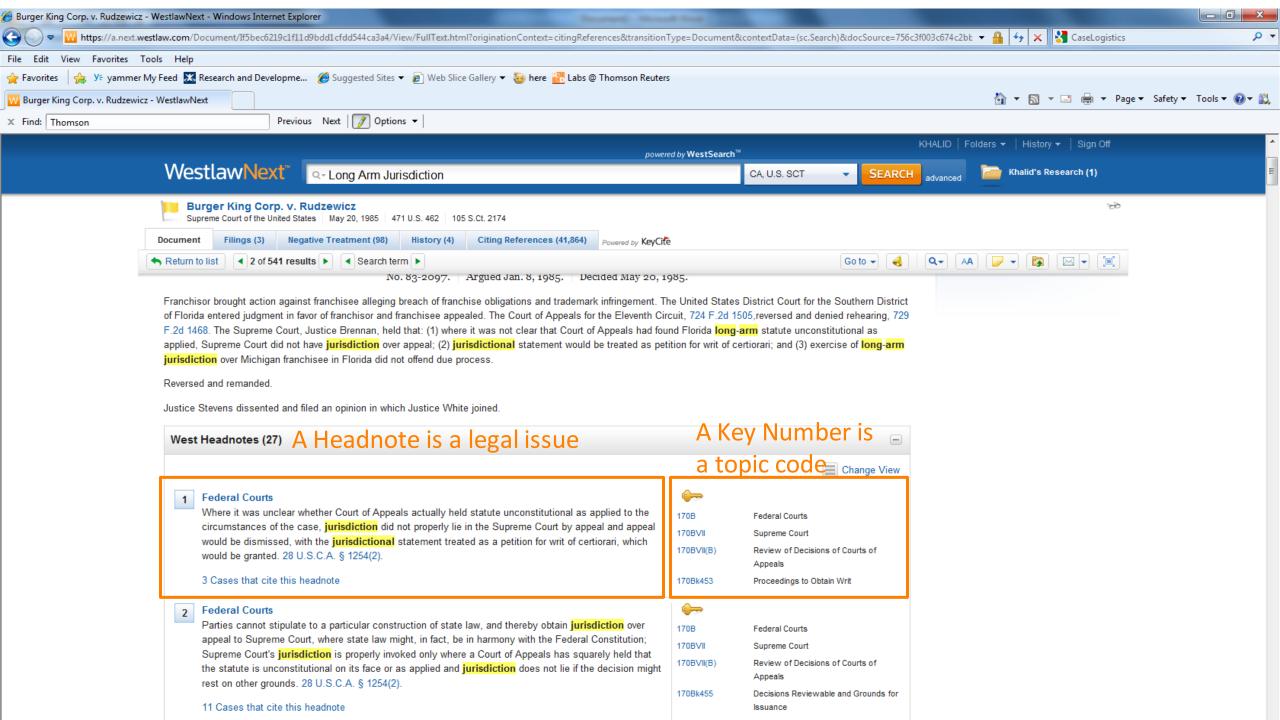
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Westlaw Next Illustration

Point of Law (Headnote) and Key Number Classification Example

