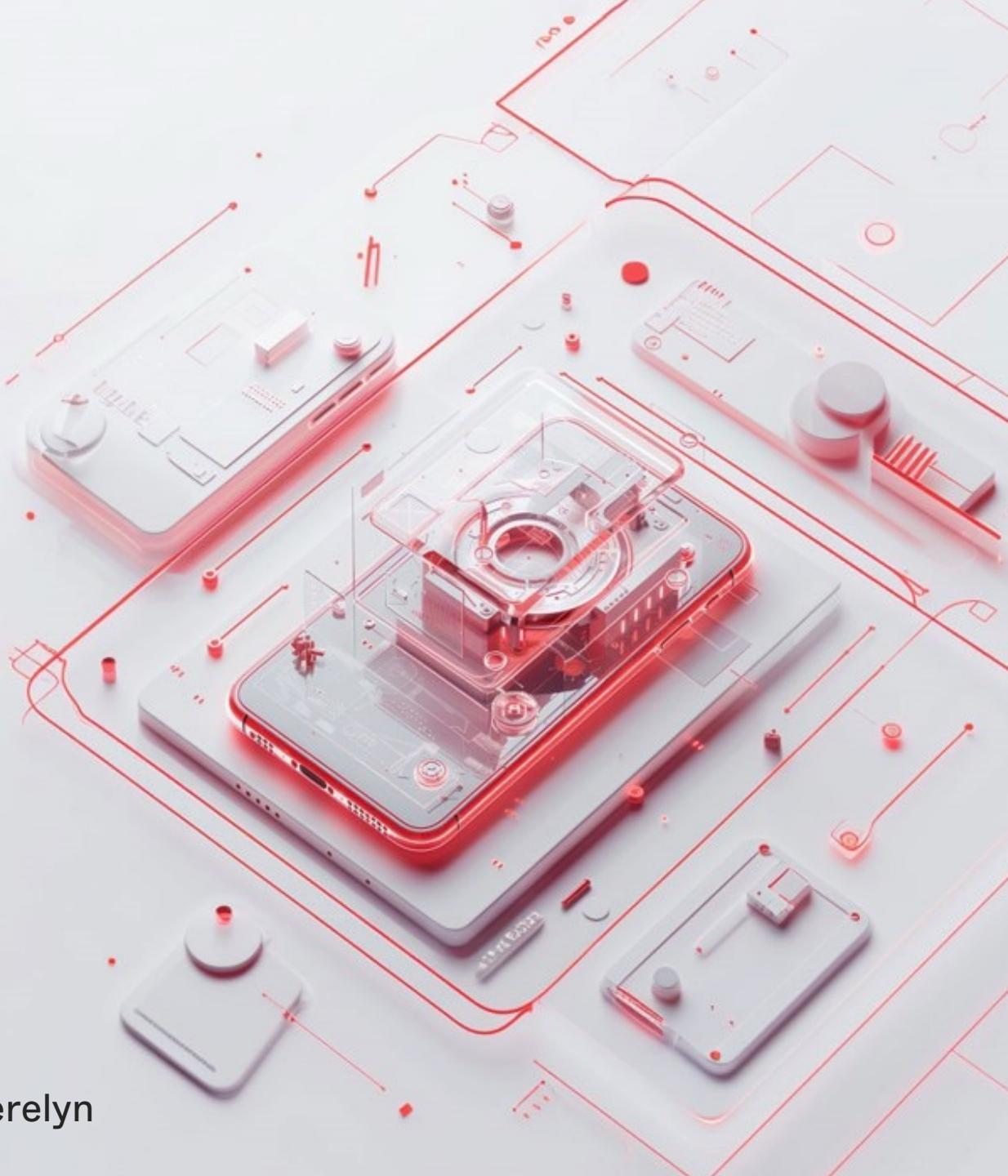


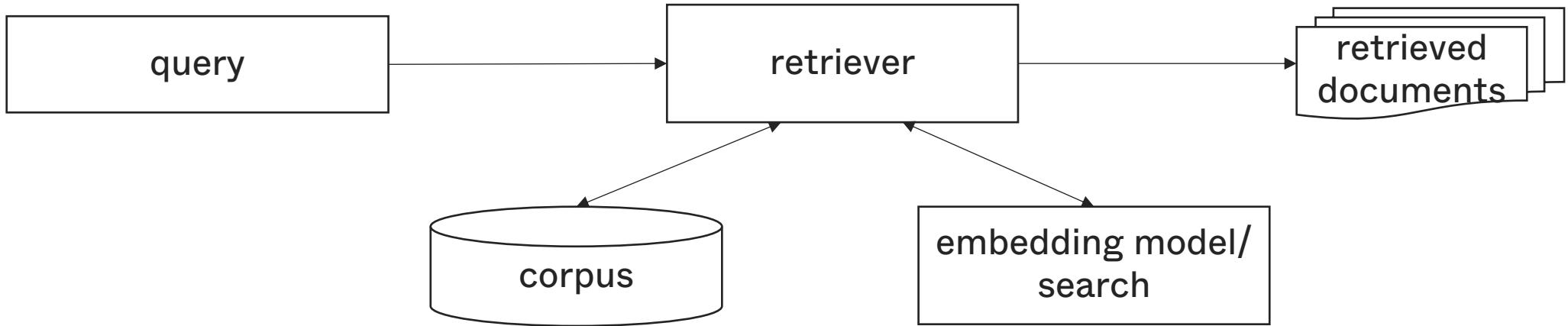
Beyond semantic retrievers

leveraging LLMs for
question-based document
ranking

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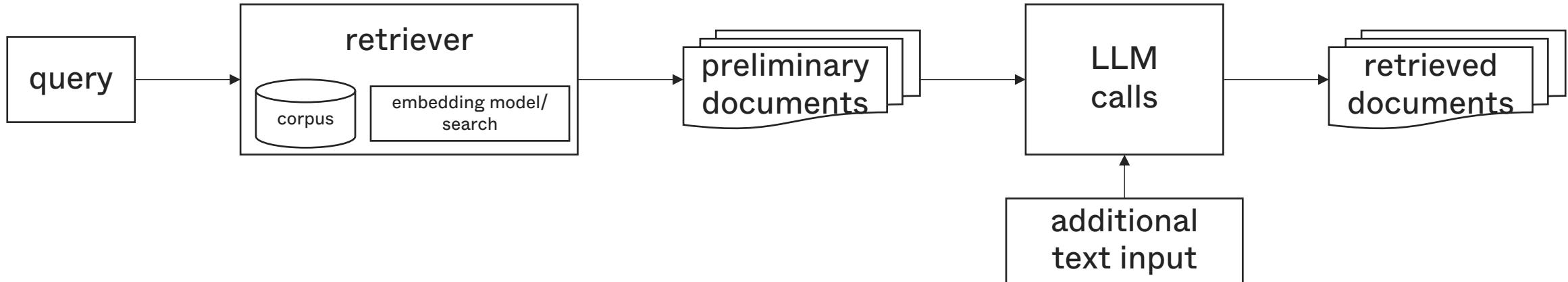
Challenges of conventional retrieval setups



Challenges:

- Semantic/keyword similarity is determined with respect to entire query
- Focusing on a lead aspect is not possible
- Order of retrieved documents cannot be refined in a reasoning process
- Poor performance for very specialized domains

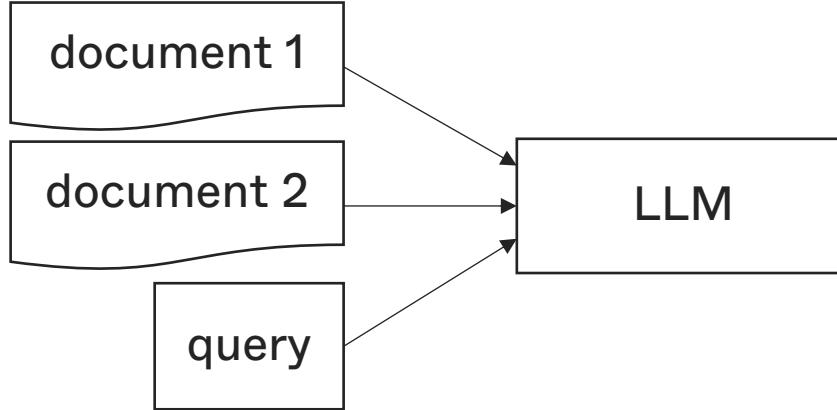
Leveraging LLMs as re-rankers



Leveraging an LLM as a reranker enables

- Performing reasoning upon reranking documents
- Injecting additional ranking aspects, metadata and rules

LLM as a document comparator



	D1	D2	D3	D4
D1				
D2	>			
D3	<	>		
D4	>	<	>	

- Project research found that this is more reliable than a one-off invocation
- Runtime and costs are to be considered due to a high number of LLM calls

Take home message

- Conventional retriever setups have difficulties handling specialized corpora and retrieval tasks with special
- We recommend considering LLMs as re-rankers in these cases
- Our experience showed that 1-by-1 comparisons yield the best results for LLM-based reranking

