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# Intelligent\* dialog for conversational interfaces

\* dynamic, data-driven, context-aware



Intelligent\* dialog  
for conversational interfaces  
with NL capabilities powered by GF

\* dynamic, data-driven, context-aware

Founded in June 2016

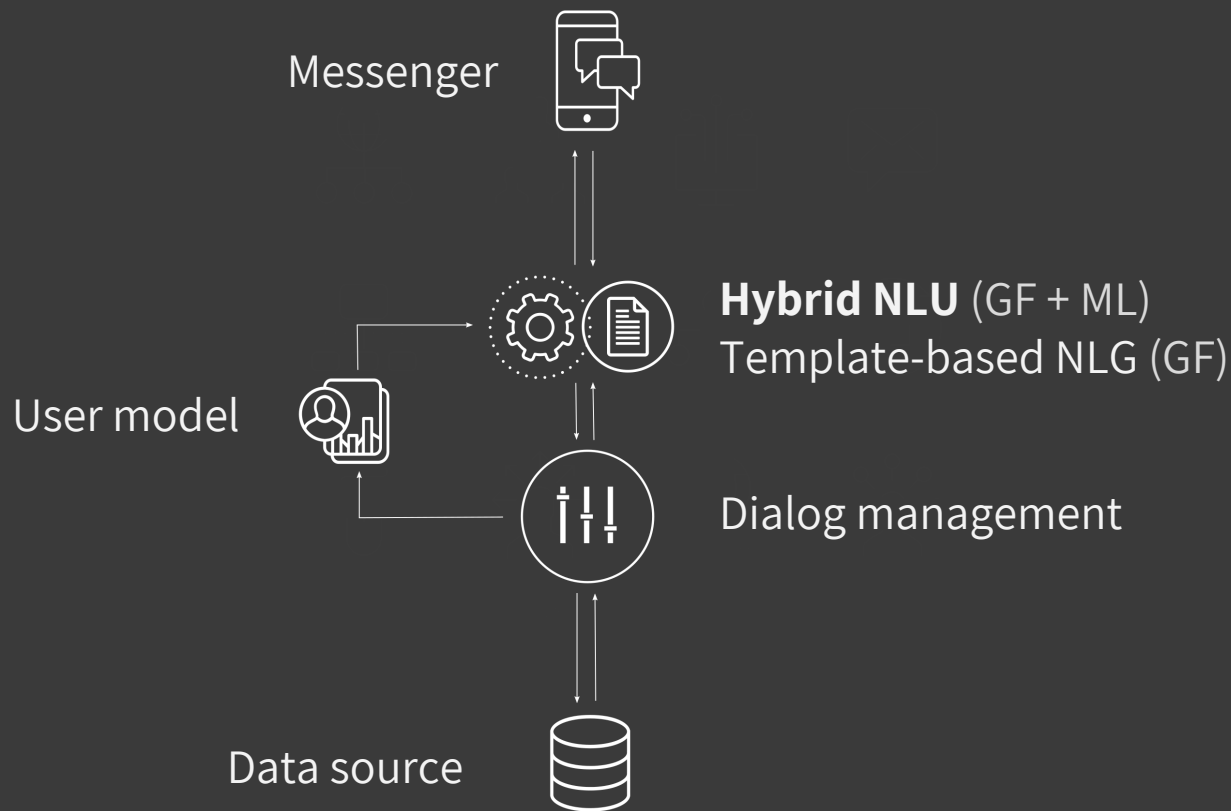


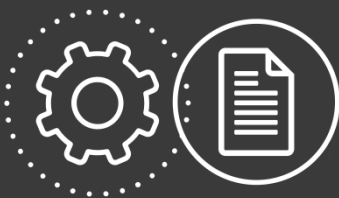
First two projects live in May & August 2017



Mercedes-Benz







## Hybrid NLU

Should be:

- **80 % ML** (for robust parsing of majority of messages)
- **20 % GF** (for specific expressions relying on domain knowledge)





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- Ich hab einen schlimmen Kater
- was leichtes
- eiweißreich
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Should be:

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Currently is:

- **80 % GF** (with chunk parsing for robustness)
- **20 % ML** (due to lack of training data)



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Separate grammars for NLU and NLG



## Separate grammars for NLU and NLG

- Natural language fragments of user and bot differ



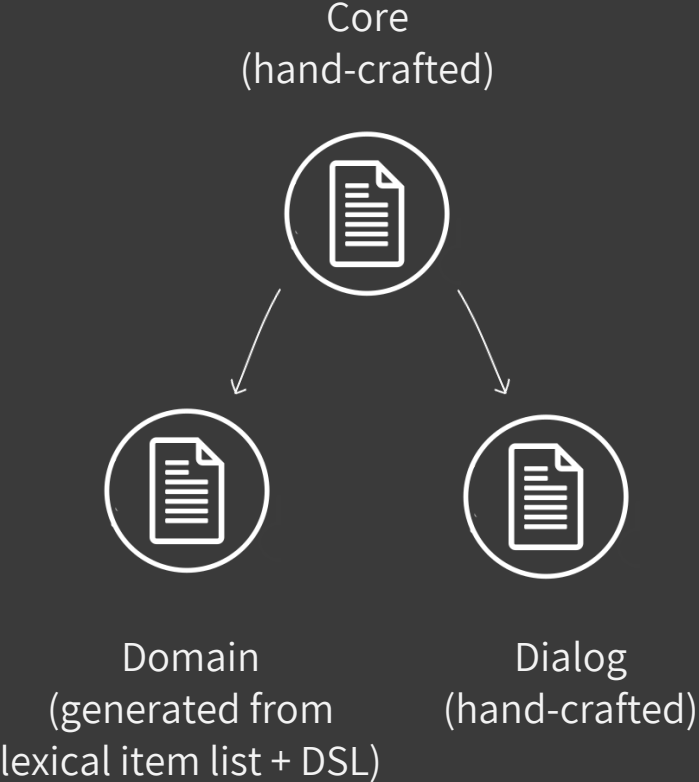
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- Natural language fragments of user and bot differ
- Different requirements:
  - NLU**: focus on robustness (over-generating, normalized)
  - NLG**: focus on adequacy (clean)

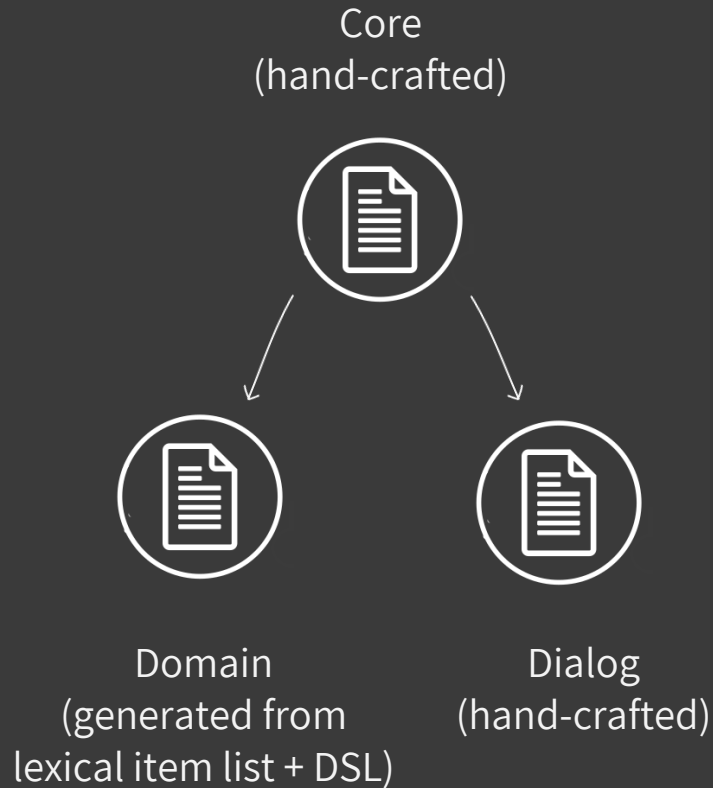
# NLU grammar



# NLU grammar



# NLU grammar



## **Future:**

GF-free interface for  
grammar authoring



Sounds exciting?

Get in touch!