



# conversational AI for entrepreneurs

Refugee Learning Accelerator  
November 2017

## ABOUT US

# Rasa is the leading open source conversational AI company and combines enterprise needs with cutting edge research

Rasa Technologies is the leading open source conversational AI company for the enterprise.

Our advanced open source Rasa Stack is used by developers to build intelligent bots and assistants. It is trusted by thousands of companies worldwide. Additionally, leading companies such as UBS, Helvetia and ERGO trust the Rasa Platform, which provides enterprise-grade features and support for deploying the Rasa Stack in a large organisation.

We're a tight-knit, fast-moving team of researchers, engineers, designers and product people, with extensive experience in machine learning, natural language processing and rapid product design.



### ***Founders:***

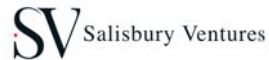
Dr. Alan Nichol (CTO)  
Alexander Weidauer (CEO)



### ***Headquarter:***

Berlin, Germany

### ***Investors:***



### ***Customers running Rasa in production:***



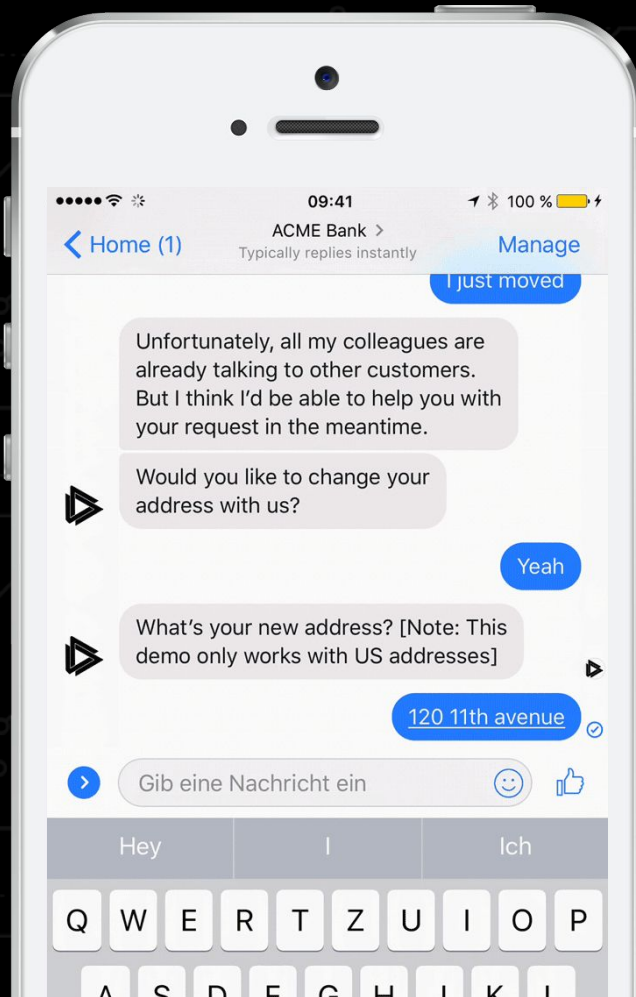
# Conversational AI will dramatically change how your customers interact with you.

## Example:

A customer can change her address via Facebook Messenger

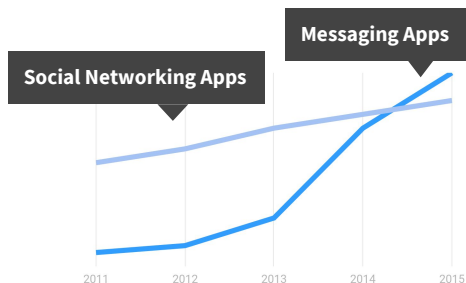


[Play demo video](#)



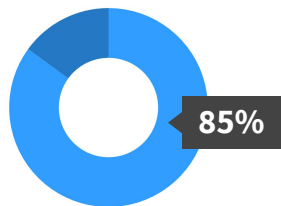
## MARKET TRENDS

# Leading enterprises have started to invest significantly into custom solutions for conversational AI



### Messaging apps have overtaken social networks

Gartner has shown that people have [stopped downloading apps](#) and instead, [messaging is picking up dramatically](#).



### More customer interaction without humans

According to Gartner, by 2020 [85% of customer interactions](#) will be managed without a human.



### Enterprises are building custom solutions

After prototyping, enterprises have started to invest significantly in their own, customized solutions in conversational AI, like chatbots.

## PRODUCTS: RASA STACK

The Rasa Stack is open source, trusted by thousands of developers and lays the foundation for building more complex, multi-turn dialogues



### Rasa NLU

Natural Language Understanding with intent and entity classification



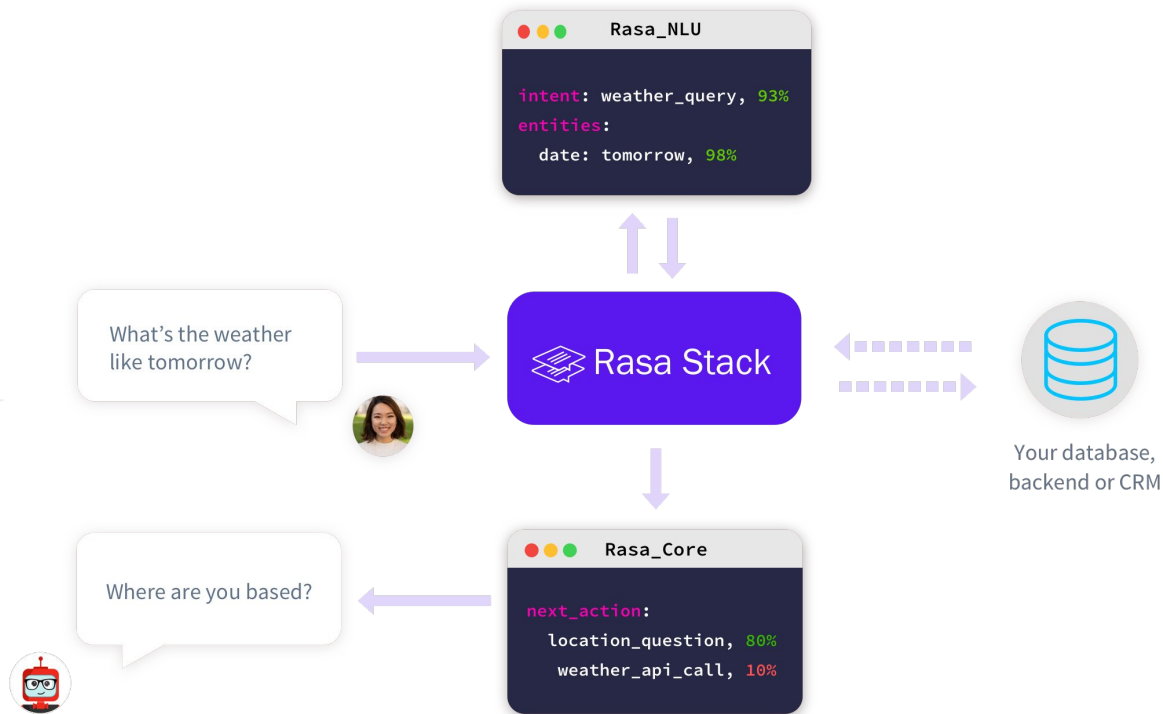
### Rasa Core

Machine Learning-based dialogue Management that allows for more complex, multi-turn conversations



### Community Support

Get support from developers using and building with the Rasa Stack on Gitter and Github



# Use Cases

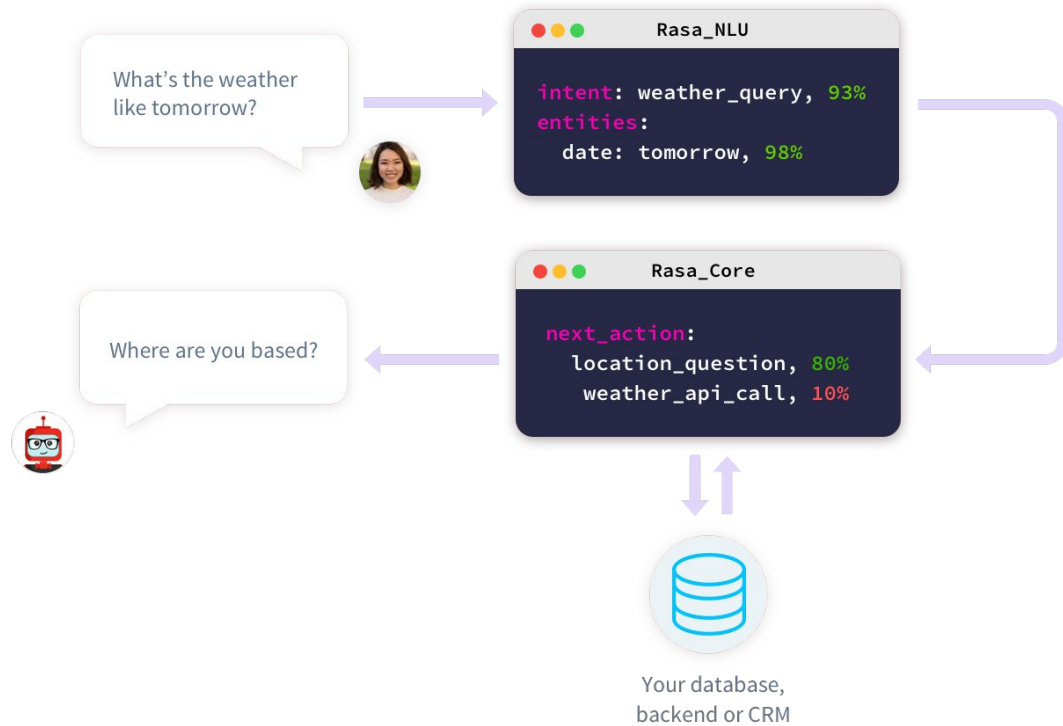
## Healthcare

- Remind patients to take medicine & answer questions <http://hiariana.com/>
- Help a charity drive patients to HIV clinics in South Africa: <http://numberboost.com>

## Education

- [Helping non-technical people explore large amounts of data without SQL](#)
- [A support bot for e-learning platforms](#)

# Elements of Conversational AI





**NLU is easy**

## NLU Basics

I'm looking for a Mexican restaurant in the center of town



```
intent: restaurant_search,  
entities :  
    cuisine: Mexican,  
    area: center
```

**NLU is hard**

## Negation

*“No I don’t want sushi”*

*“I’d go hungry before eating sushi”*

**NLU is impossible**

## Do These Sentences Mean the Same Thing?

Can you help me log in to my account?

Can I give someone else access to log in to my account?

The company fired the manager who was hired in 2002

The Company fired the manager who was embezzling money \*

*\*Conversational Eliciture in a Bayesian Model of Language Interpretation, Andrew Kehler, SIGDial 2017*

# Dialogue

## Example from an insurance company: Handling complex, multi-turn dialogues with Rasa

*Customer starts with an indirect request*



I just moved

Would you like to change your address?



*AI asks a qualification question to make sure it gets the customer's question right*

*Customer confirms*



Yeah

Please provide us with your new address



*AI follows up*

*Customer provides incomplete input*



It's 120 King St



*AI connects with Maps API*



Which city do you live in?

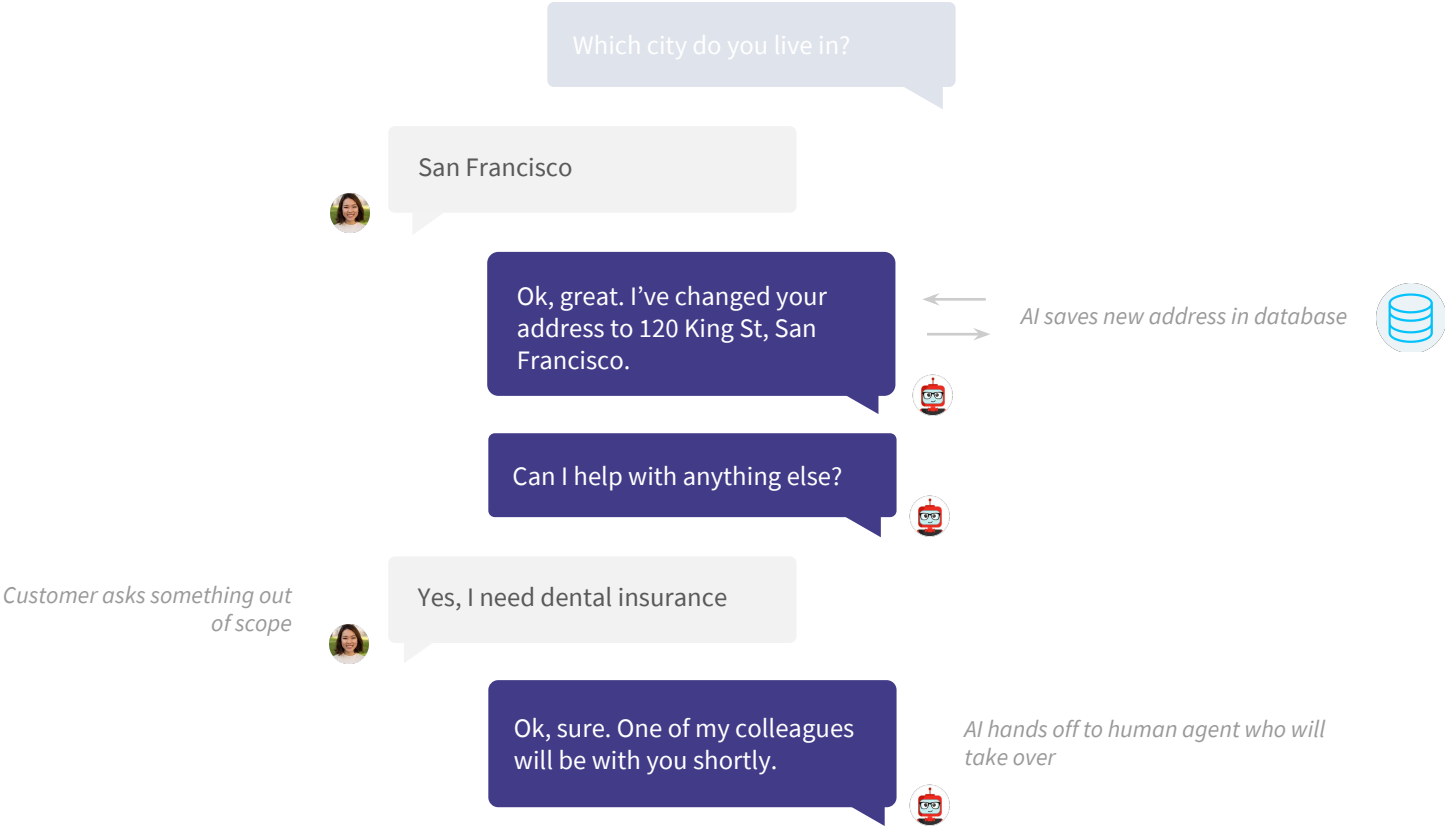


*AI asks a clarification question*

Note: User has already been authenticated by AI.



DIALOGUE MANAGEMENT EXPLAINED (2/2)



# Tools

## Most vendors of conversational software technology don't fit into the a highly customized IT landscape of a large enterprise

Level of bot success →

### Drag & Drop

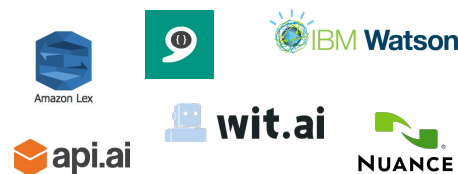
- Use for: Quick prototyping and user testing
- Customization: Low
- Example customers: Innovation Labs

### Off-the-shelf

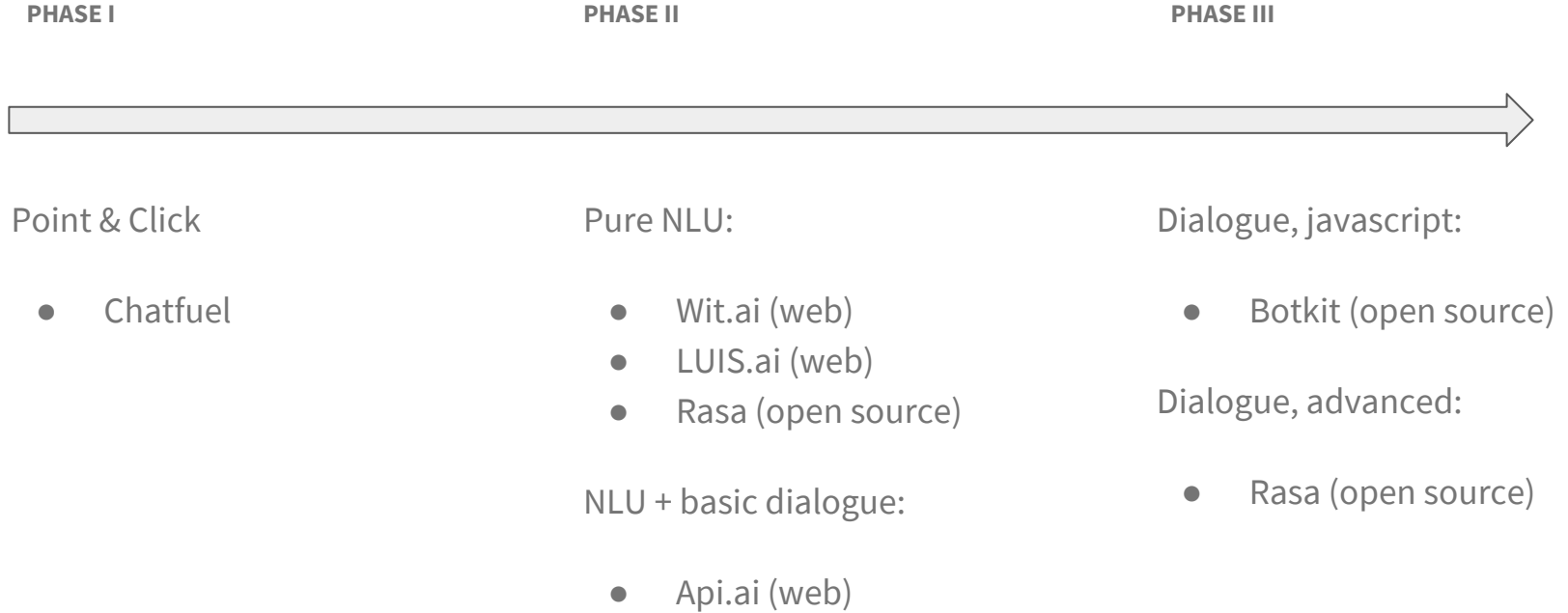
- Use for: Limited deployments in one specific business function like customer service or sales
- Customization: Medium
- Example customers: SMBs

### Custom

- Use for: Large scale deployment across multiple business functions
- Customization: High
- Example customers: Enterprises



# What should I use?



# Platforms

# Messenger

- > 1 Bn users
- Full support for bots
- You can't have a bot without a facebook page, but one bot can 'listen' to multiple pages

<https://developers.facebook.com/docs/messenger-platform/>



## Slack

- Easy to build for
- Easy to test yourself
- Hard to give to your friends to test



# Thanks!



**Alan Nichol**

*Co-founder & CTO*

alan@rasa.ai

