

# What makes a successful speech-enabled call routing application?

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- Who are we?
- Why speech-enabled call routing?
- What is speech-enabled call routing?
- Performance measures
- Success factors in various phases
- Summary

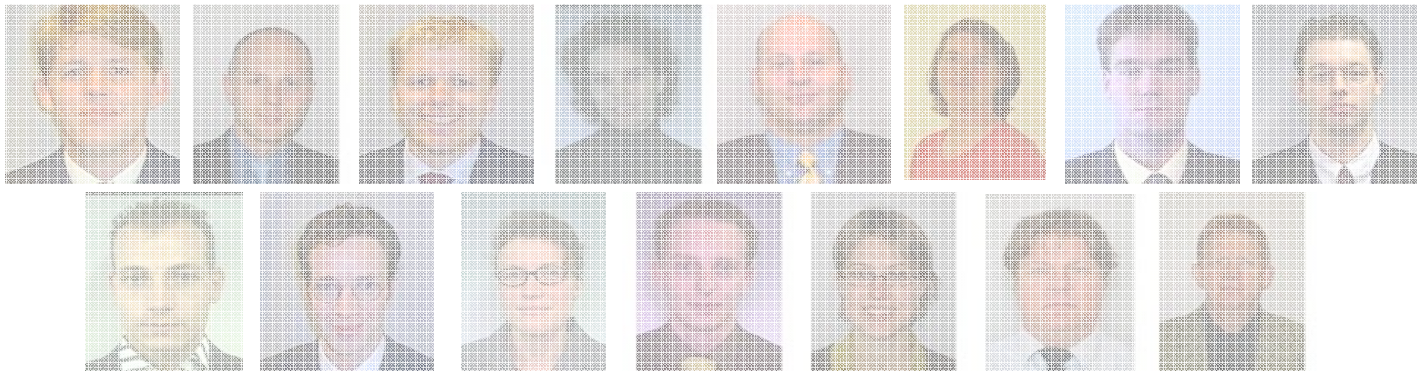


# Who are we?



LogicaCMG and speech technology:

- The VOICE team as part of Customer Contact Solutions
- Expertise on the design, implementation and integration of telephony self services in existing architectures



- **CLAIRE:** a 24 hour speech-driven operator and receptionist
- **Mobile ticket service:** mixed-initiative dialogue system through which mobile phone users can specify their journey and order tickets
- **Stock Information Speech Portal:** open dialogue system in which users can request share holder's information, information on funds, tips and so on. The system takes into account the expertise of the user
- **Call routing applications**
- **Voice Verification:** users get access to their accounts based on biometric data of their voice (not yet fully implemented)

## Why speech-enabled call routing? (1)



- Route calling customers to appropriate agent or service in call center
- Customers usually press keys: touch-tone IVR
- Touch-tone IVR menus remote from customer's intuition:
  - Many time-outs
  - Wrong choices
  - Transfers to operator
  - Pressing '0'
- IVR menus needed in large organizations:
  - One contact number
  - Specialized agents

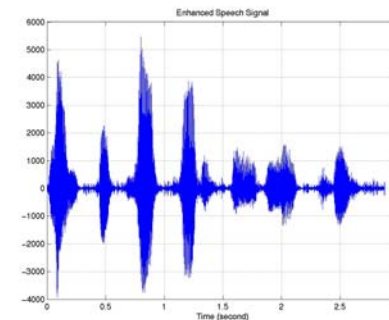


## Why speech-enabled call routing? (2)

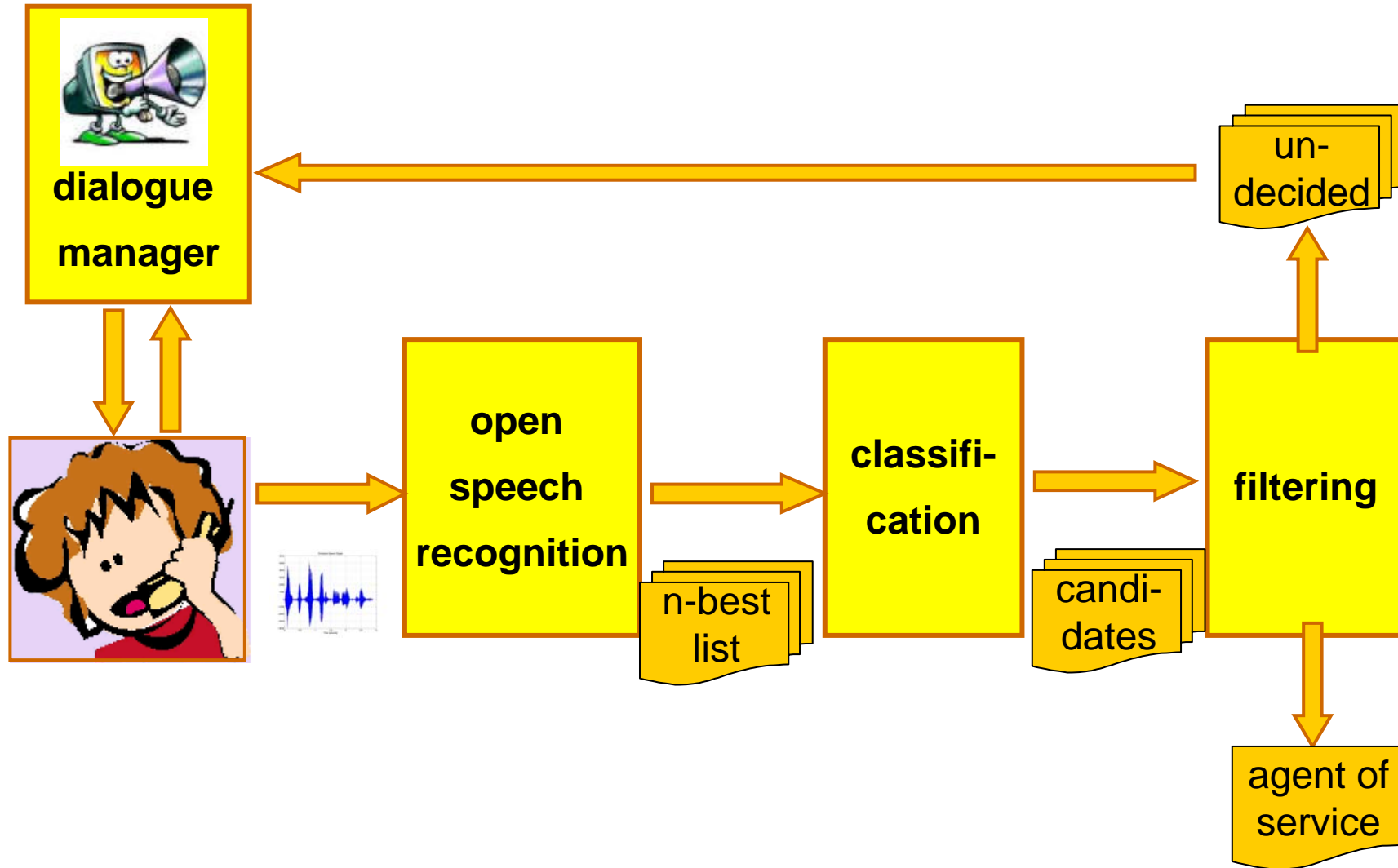


Speech-enabled call routing:

- Facilitates same functionality as touch-tone IVR
- Open Speech Recognition
- Much more customer-friendly:
  - Customer is free to speak question in a natural way
  - Customer no longer needs to choose
  - Shorter and more efficient dialogues



# What is speech-enabled call routing?



- Success of spoken dialogue systems often expressed in:
  - Dialogue Success Rate
  - Recognition accuracy: Word Error Rate
- BUT, is the application:
  - widely used?
  - appreciated by customers?
  - appreciated by employees of service provider?
- THEREFORE, other factors:
  - Customer experience
  - Involvement within organization





## Design phase:

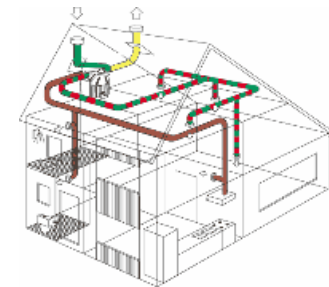
- Establishing functionalities
- Dialogue design
- Determining exit points

## Building phase:

- Coding and testing
- Collecting training material

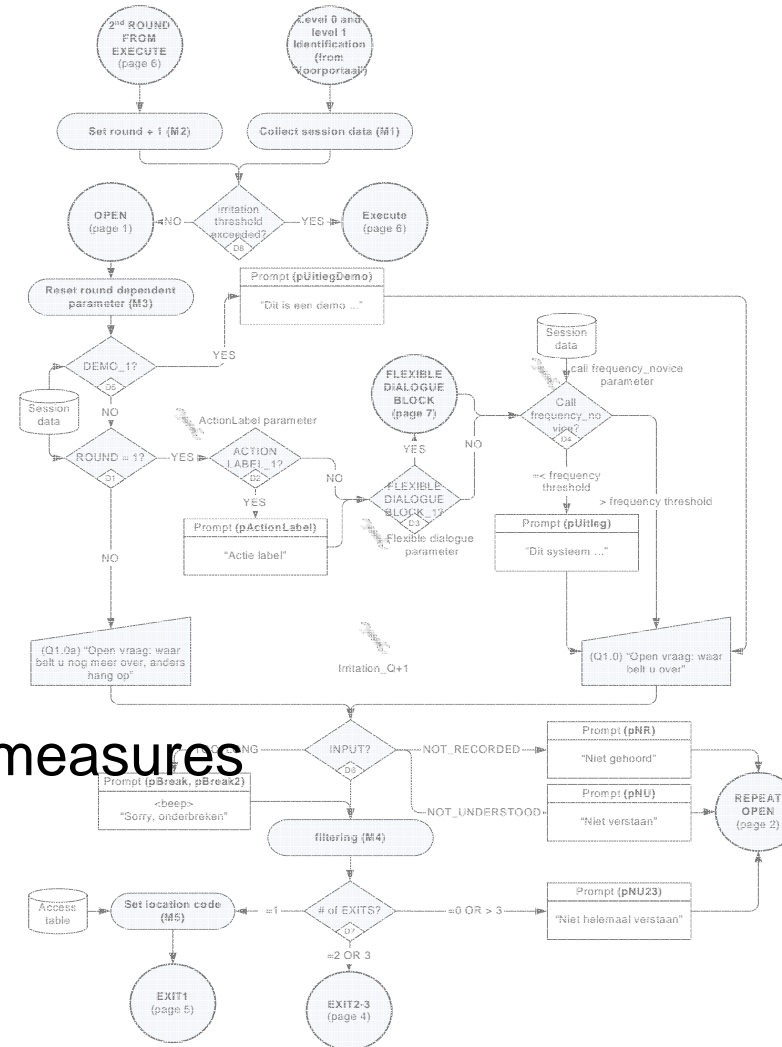
## Deployment phase:

- Training call center agents
- Business intelligence



## Dialogue design

- Contradicting interests:
  - Technical performance
  - Customer experience
  - Organizational issues
- Influences all performance measures



### Determining exit points



- Agents are skilled in different tasks, answering various types of questions, i.e. categories
- Organization of call center leading in selecting exit points?
- Customer centered approach
- Number of exit points
  
- Influences all performance measures

### Collecting training material, i.e. collection of tagged sentences

- “The more the better”?
- Well-distributed over exit-points
- Training material should resemble real customer questions:
  - Terminology and formulation
  - Variance



- Collecting strategies:
  - Spoken material (live or simulated)
  - Written material (natural or simulated)



- Influences technical measures and involvement within organization

### Training call center agents

- Learn new conversational techniques
- Learn how to interpret recognized sentence



### Business intelligence

- Valuable information can be retrieved, e.g.
  - Statistics, e.g. load effect on call center
  - Effect of marketing campaign
- Both increase the support within organization

- Besides commonly used **technical performance** measures also other factors play important role in the success of a speech-enabled call routing application
- These factors are **customer experience** and **involvement within organization**
- During various phases of implementation these factors play an important role
- Sometimes conflicting interests

**Thank you!**



Questions?