

The Elements of Intelligent Assistance: Catalysts for Digital CX

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What is Intelligent Assistance

- Software that augments or substitutes for human assistance
- Understands person's intent and context
- Offers targeted information or executes desired task
- Grows "smarter" with use
- Engages user in natural, conversational manner

Conversational Technologies

- Speech I/O

Speech I/O
(TTS & ASR)

- Speech recognition
- Life-like text-to-speech

- Text I/O

Text I/O

- Chatbots
- Resembles search
- Supports messaging

- Avatars

- Human-like
- Animated

Avatars

- Emotions & Sentiment Analysis

- Empathetic
- Non-verbal communications

Emotions & Sentiment

Intelligent Assistance Technologies

- **Speech Analytics**

Pattern recognition – Topic extraction

Speech
Analytics

- **Semantic Search**

Discovery – Trade-off Analysis

- **NLU**

Intent recognition – Classification

NLP, Machine
Learning &
Semantic
Search

- **Machine Learning**

Constant Improvement – Dynamic Understanding

Knowledge Management

- Fundamental to improved context & complexity
- Help bridge gap between fully automated self-service & human-assisted

Knowledge
Management



Intelligent Assistance Tech Stack

Conversational Technologies

Speech I/O
(TTS & ASR)

Text I/O

Avatars

Emotions &
Sentiment

Intelligent Assistance Technologies

Speech
Analytics

NLP &
Machine
Learning

Semantic
Search

Knowledge
Management

Mobile & Personal Assistants

Mobile Assistant
(smart objects)

Home Assistant
(smart home)

Car Copilot
(connected car)

Personal Advisors

Shopping Assistant

Wellness Assistant

Travel & Entertainment

Financial Advisor

Social & Dating

Virtual Agents & Customer Assistants

Mobile Care

Customer Service
Virtual Assistant

Employee Assistants

Scheduling Assistant
(calendar, tasks & habits)

Sales Assistant

Expert Location
& On-Demand Services

Bot Platforms

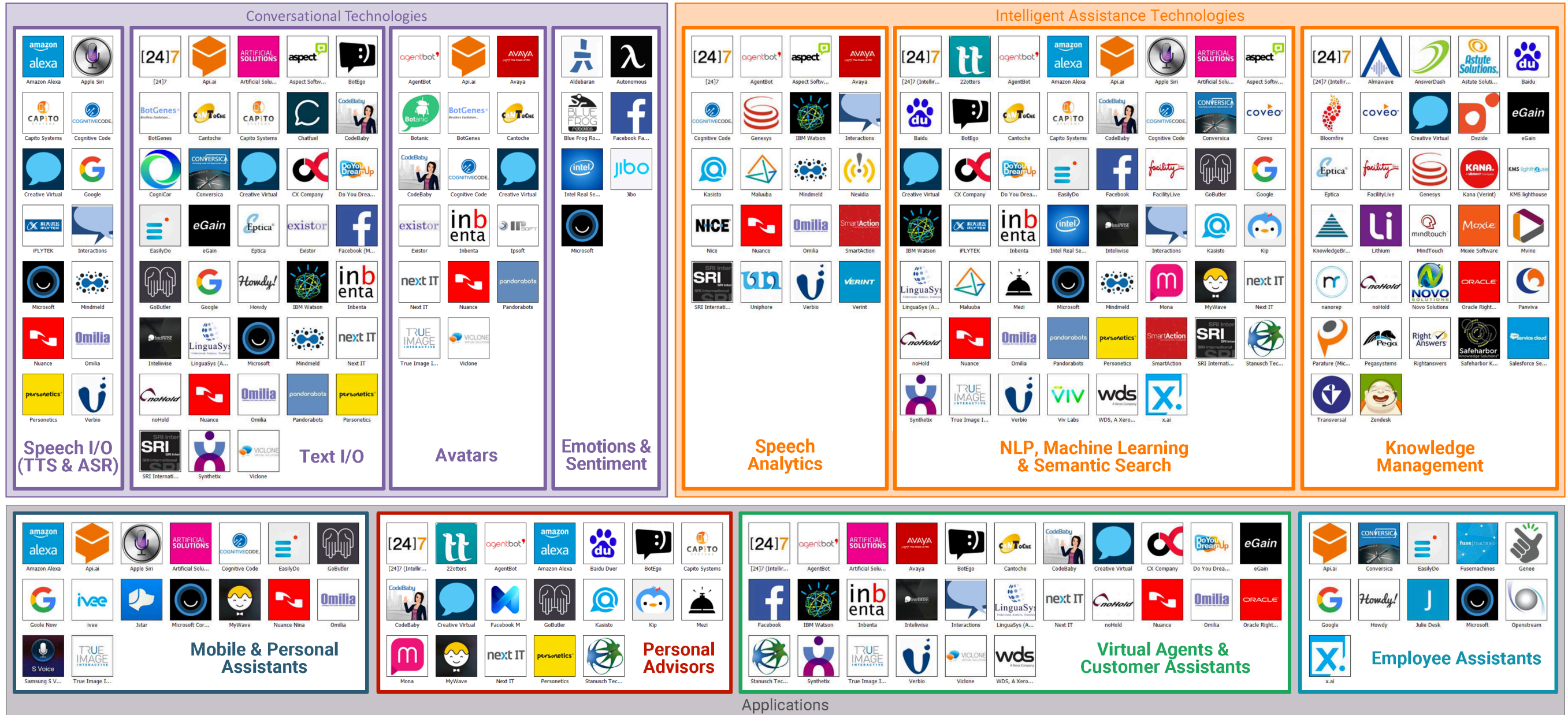
Role: deal with smart objects

Role: deal with complex tasks

Role: consumer

Role: employee

IA Landscape Continues to Expand



IA Landscape 2.0 : Sign of Maturity

- Significant boost: 110 companies represented (57% increase from version 1.0)
- Clear delineation between speech input and text input
- New era of bots and social robots
- Emphasis on knowledge management

Evolution of Conversational UX

- Conversations are diverging across two platforms: Voice and Text (Messaging)
- Messaging popularity + NLP & machine learning = Botsplosion!
- ASR + intent mapping & fulfillment = Alexa phenomenon

Challenges Ahead

- Meeting increased customer expectations for seamless self-service
- Living up to the new hype around machine learning
- Understanding the opportunities (and pitfalls?) or the “botsplosion” and “end of apps”
- Finding the right synergies between humans and machines

IA Conference London 2016

- Real-world implementations & use cases
 - Swedbank, Shell Corporation, Ticketbis, Virgin Media Business
- Topics for Discussion
 - IA implementation approaches and best practices
 - Integrating IA with existing assets
 - Spotting trends and separating hype from real opportunity