



Getting Started with IBM Watson for Customer Care



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(now with added badges!)

iPower, Wolverhampton, Nov 2019



Abstract

- Part 3 of i-UG's series on Customer Service with IBM.
 - First, we heard customer case studies using IBM i integration for Customer Service.
 - Then we saw how IBM Watson can help to transform your Customer Care.
 - Now let's look at how to get started with AI ... on a tight budget and without coding ... whilst positioning for future integration. Also includes a recap of parts 1 & 2.
 - Presentation download available.
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Agenda

- Part I – Customer Service with IBM i
 - 8 Steps of Customer Interaction
 - IBM i Integration
 - IBM i Case Studies
 - Part II – Customer Care with IBM Watson
 - Artificial Intelligence & Customer Care
 - IBM Watson
 - IBM Watson Use Cases
 - Watson Assistant Live Demo
 - Part III - Getting Started with IBM Watson
 - Roadmap
 - Getting Started
 - Watson Pricing
 - Summary & Close
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Part I - Customer Service with IBM i

What is Customer Service?

- “Customer service is the provision of service to customers **before, during and after** a purchase. ...
- It includes:
 - Customer support
 - Despatch of customer service
 - Feedback & surveys

What is a Contact Centre?

- First point of contact for inbound calls, and optionally...
- Targeted outbound call operation
- All firms have a 'contact centre' - even if it is not called that - as their primary customer interface. What do you call yours?
 - Helpdesk? Technical Support? Inside Sales? Customer Service? Order Desk? Credit Control? Collections?
- Terminology
 - A 'Call Centre' is for phone calls
 - A 'Contact Centre' may also cover Web chat, email, fax, social media, etc.
 - The members are called 'Agents'
- ... but different organisations do it different ways ...

Phone or Not? a) Don't Call Me!



Glasgow City Council > Contact Us

Quick Search



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The quickest and most convenient way to contact us is through our website. Use our Save Time Go Online page to report, request or pay for services at a time that's convenient to you 24/7.

How to contact us



Report, request or pay

- To report an issue, request a service or make a payment use our Save Time Go Online services.
- To make an enquiry regarding Council Tax you can use our Council Tax enquiry form

Make a comment or compliment

- Complete our comment and compliments form.

Get in touch

Make a comment or compliment



Make a complaint



Related content

Customer Comments, Compliments and Complaints Privacy Statement


Phone or Not? b) Please Call Me!

- Some organisations do want to talk to you.

Why Choose Us?

-  **FREE** Breakdown Cover
-  **FREE** Gadget & Bag Cover
-  **FREE** Claim Assistance
-  **UK Based** Staff & Offices
-  Friendly and **Experienced** Staff
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 admin@bewiser.co.uk

Let us Call You Back >>

 **Need to Make a Claim?**

Call **0800 2982820**

Open 24 hours a day

8 Steps of Customer Interaction

Deliver service quality

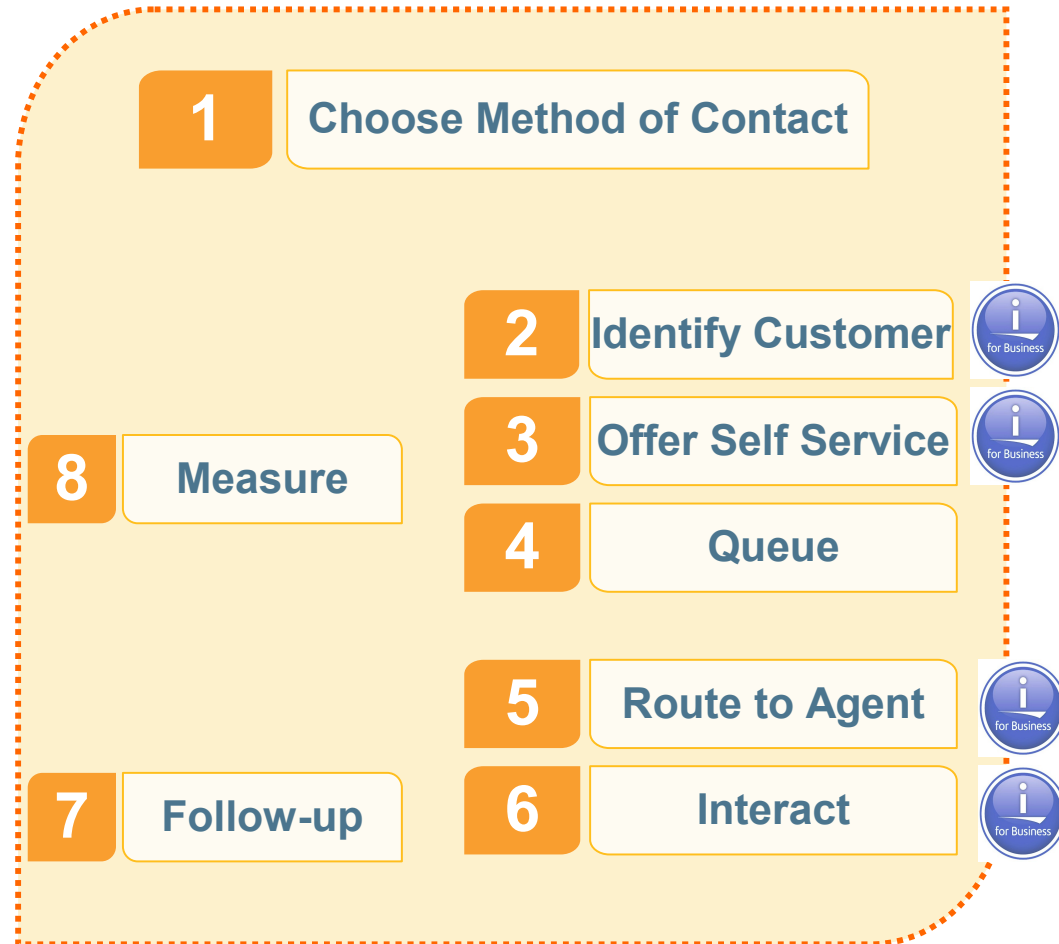
- Fast, effective service
- Defined business rules

› Optimise the resources

- Manage productivity
- Identify any problems

› Deliver new revenue

- Outbound telemarketing
- Differentiated support
- Recovering lost sales



Possible IBM i Integrations

- Main integration points
 - Click-to-call (outbound)
 - Screen pop (inbound; generic or customer targeted)
 - Data Dip for IVR
 - Data Analytics
- ERP, CRM, Shipment, Customer helpdesk
- App-specific integrations
 - e.g. Salesforce.com

Typical Contact Centre 'Lite' options

- › With most modern phone systems you get (for free):
 - Inbound
 - Voice
 - Overflow
 - Basic functionality
 - Announcements in queue
 - Batch Reports
- › and optionally add (for fee):
 - Wallboard
 - Call Recording
 - Enhanced reporting
- › A full Contact Centre adds:
 - Outbound & blended
 - Self service
 - Multimedia (chat, email)
 - Callbacks
 - Real time information
- › To choose, do your discovery thoroughly ... department by department. It is not an IT question.
 - Use the discovery form

IBM i Integration – Nu-Swift

- Nu-Swift International Ltd
 - Nationwide fire protection
- Task Management App
 - To issue routine and call-out tasks by SMS to over 80 site engineers & sub-contractors in response to customer calls
- Click to Call App
 - Enables users to click-to-call an on-screen telephone number without manual dialling. It is mainly used by Customer Services and Credit Control.

IBM i Integration – Scott & Co

- Scott & Co
 - Scottish Sheriff Officers & Messengers at Arms (the service of legal papers) and debt recovery service
- Screen Pop of RPG CRM
 - An API sits on agent PC. The CC application passes the inbound identifying number of the caller, if known, to a Data Queue. A Trigger queries DB2 to find a customer match and then pushes the customer record to the agent's 5250 session.

IBM i Integration – Morphy Richards

- Morphy Richards
 - South Yorkshire-based consumer products - electrical appliances. Part of the worldwide Glen Dimplex group.
- Survey App (in development)
 - Intercept the voice call when the agent hangs up and takes the caller through an optional survey.
- Also email integration. Chat in plan.



Part II - Customer Care with IBM Watson

You Already Know AI





- Amazon Alexa/Google Assistant/Apple Siri/MS Cortana
 - All Virtual Agents
 - Amazon Web recommendations
 - Air travel, NATS, e.g. strikes, volcanoes
 - Traffic management systems
 - Medical diagnoses - better than medical panels, e.g. ophthalmology
 - So how can we use it in our business?
-

Virtual Agent Roles in Customer Care

- a) Help Customer (chat bots + ...)
 - Natural Language Processing
 - Interpret Customer Needs
 - Search Knowledge Base
 - Sentiment Detection
 - Pass to live agent if upset
 - b) Help Live Agent
 - Agent Assist
 - suggest processes, recommend products
 - Search Knowledge Base
 - less reliance on knowledge retention
 - Continuous Agent Coaching
 - Improve Future Interactions
-

What is IBM Watson?

Watson is AI for business

	Watson Business Solutions				Watson Applications			
 Applications, solutions and services Targeted solutions for enterprise businesses	Compliance Assist	Customer Care	Expert Assist	Voice of the Customer	Watson Supply Chain	Watson Assistant Solutions	Watson Compare and comply	ISV and 3 rd party apps
 AI – Watson APIs Building blocks for developers	Assistant	Discovery	Text to Speech	Personality Insights	Tone Analyzer	+ Training Tools		
	Visual Recognition	Speech to Text	Nat Language Understanding	Nat Language Classifier	Language Translator	Compare & Comply		
 AI Lifecycle Management Tools to prepare data for AI, train and deploy	Watson Knowledge Catalog (Organize and Govern data)		Watson Studio (Build)		Watson Machine Learning (Deploy, Run, Continuous Learning)		Watson Open Scale (Operate Trusted AI)	
	Data Engineer		Data Scientist		App Developer		AI Ops	
 Cloud – Infrastructure A highly scalable, security enabled infrastructure	Cloud integration		Micro-services			DevOps Tooling		
	Networking	Compute	Security	Containers	Virtual Servers	Object Storage	...more	
	Public		Hybrid			Private		

Watson Assistant

- AI assistant for business (a REST API)
- Manages conversation in natural language.
- “More than a chatbot”
 - Basic chat bots identify key words and select from matching standard answers.
- Search knowledge base
- Ask for clarity
- Supports 13 languages
- Redirect to a human
- Deploy on your Web site, in a mobile app, on the phone, in messaging channels and to customer service tools.
- Runs on any cloud - IBM, Amazon, Google, Microsoft. Integrates with Facebook, Slack and voice at the front end, with systems like Watson Discovery to retrieve information, and with ERP, CRM, PoS to read and write information.

Watson Assistant, contd.

- › Developers not required
 - Pre-trained with industry content. Has a visual dialog editor.
- › Features to create advanced conversational assistants:
 - Bootstrap - Upload and search human chat logs to add real user utterances to intent user examples. Watson recommends similar sentences based on what's currently in the intent.
 - Search skill - Improve the coverage of your assistant by calling to Watson Discovery from any dialog node.
 - Disambiguation - user select their intention from a list of options
 - Digressions - Use to dynamically answer questions or redirect a user within the context of a business process
 - Intent conflict resolution - flags examples that are too similar and ask you to choose
 - Out the box integrations to service desk apps - Intercom, Zendesk, Salesforce, etc.

Watson Assistant – Key Use Cases

- Customer Care
 - Decrease call centre operations cost, improve the customer experience and develop new revenue streams
 - Employee Productivity
 - Simplify access to common questions and tasks through enterprise channels – often HR related.
 - Conversational Commerce
 - Provide guided buying experience for prospective customers to purchase goods and services through the mobile or messaging channel of their choice
-

Watson Assistant Demo

- Watson Assistant - BankBot
 - Simulates a few banking scenarios
 - make a credit card payment
 - booking an appointment
 - choosing a credit card.
 - Watson understands your entries and responds accordingly
 - <https://watson-assistant-demo.ng.bluemix.net/>
 - Backup (similar)
 - <https://www.bewiser.co.uk/>
 - Uses chat bot to help you fill in a form for a car insurance quote then a) call or b) chat to a real agent (based on availability). So, no queues. Prequalify for agent.
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Watson Assistant IBM i Password Reset

- IBM Montpelier's Demo
 - To reset IBM i passwords
 - <https://www.youtube.com/watch?v=O6rJtQgmjDo>
 - Architecture
 - Slack
 - Messaging app for user interface/front end
 - Watson Assistant
 - In IBM Cloud. For predefined dialogue training
 - Node-RED
 - Node.js dev app. Chatbot application logic/workflow. On IBM i 7.3,
 - IBM i & DB2
 - to retrieve *USRPRF attributes. Get system info with SQL SELECT
 - Twilio
 - Cloud phone APIs. Not essential but gives 2FA SMS auth. code.

IBM Watson with IBM i Integration

- David Spurway's 'chatbot'
 - Used to answer queries like 'What IBM i releases are in support?'
 - Also combines Watson Assistant with Node-RED
- See David for details and copy of the code when ready

Watson Discovery

- Documents automatically or manually added to a collection
- Natural language processing with advanced text analytics
- Machine learned relevance for most appropriate answers
- Automatic updates to training as data and usage changes without manually creating new training data
- Application of the knowledge of unique entities and relations in an industry or organisation
- Pre-enriched ready-to-use news collection
- Document Similarity surfaces textually similar documents
- Retrieval from external content for more complex questions
- Enterprise data sources (SharePoint, Salesforce, etc.)
- Smart Document Understanding - extract tables and custom document content via rapid labelling of unstructured data
- 11 languages



Part III - Getting Started with IBM Watson

IBM Roadmap



Prove

"How do I reduce my customer hold times?"
"How do I make my agents more productive?"
"How can I reduce agent attrition?"



Adopt

"How do I support customers across multiple channels?"
"How do I scale across my support organizations worldwide"



Transform

"How do I make my customer care organization an AI first organization?"

Driving progressive value with IBM Watson AI Customer Care

Capabilities

- Multi-channel support based on customer preference - Web/Bot/IVR
- Interaction supports FAQ , Process Assistance, Research / Deep Search
- Information Sources include Q&A , curated question/answer pairs for FAQs
- Intents are function specific with support for a very specific set of questions or tasks
- Support for 1-2 languages and single region

- Increased Cross Channel Integration
- Expanded Interaction support with Follow-up Action and recommendations based on the initial interaction and available user profile information
- Broad / unbounded unstructured information sources for complex searches
- Intents covers "most" customer care requests to a single department
- Multi-language and region support

- Seamless Cross Channel Integration
- Process "Execution / Automation" – ability to perform transactions for the user
- Live Data (Personalized Answers) – Integration with back-end system integration
- Intents cover customer care across the enterprise
- Robust KPI measurement that feeds into corporate decision systems

Approach

- Start with relevant use case focusing on the customer or agent: Care care Virtual Agent/ Customer Care Voice Agent/Customer Care Agent Assist/Agent Assist for Salesforce
- Implementation span ~2 to 3 months

- Combine use cases e.g. Customer Care Voice Agent with Agent Assist for driving additional value or adopt across regions or functions for the company
- Implementation span ~6 to 12months

- AI Competency established and integrated with company wide digital initiatives
- Customer Care resources creating additional value from digital exhaust
- Implementations span over 12months

Representative Customer Outcomes

30 min saved per question for common queries to call-center agents
5.4 min Resolution time for most questions from 1.5 days

700K Calls handled by Watson, equivalent of 55 contact center reps
11 Products supported in less than 6 months

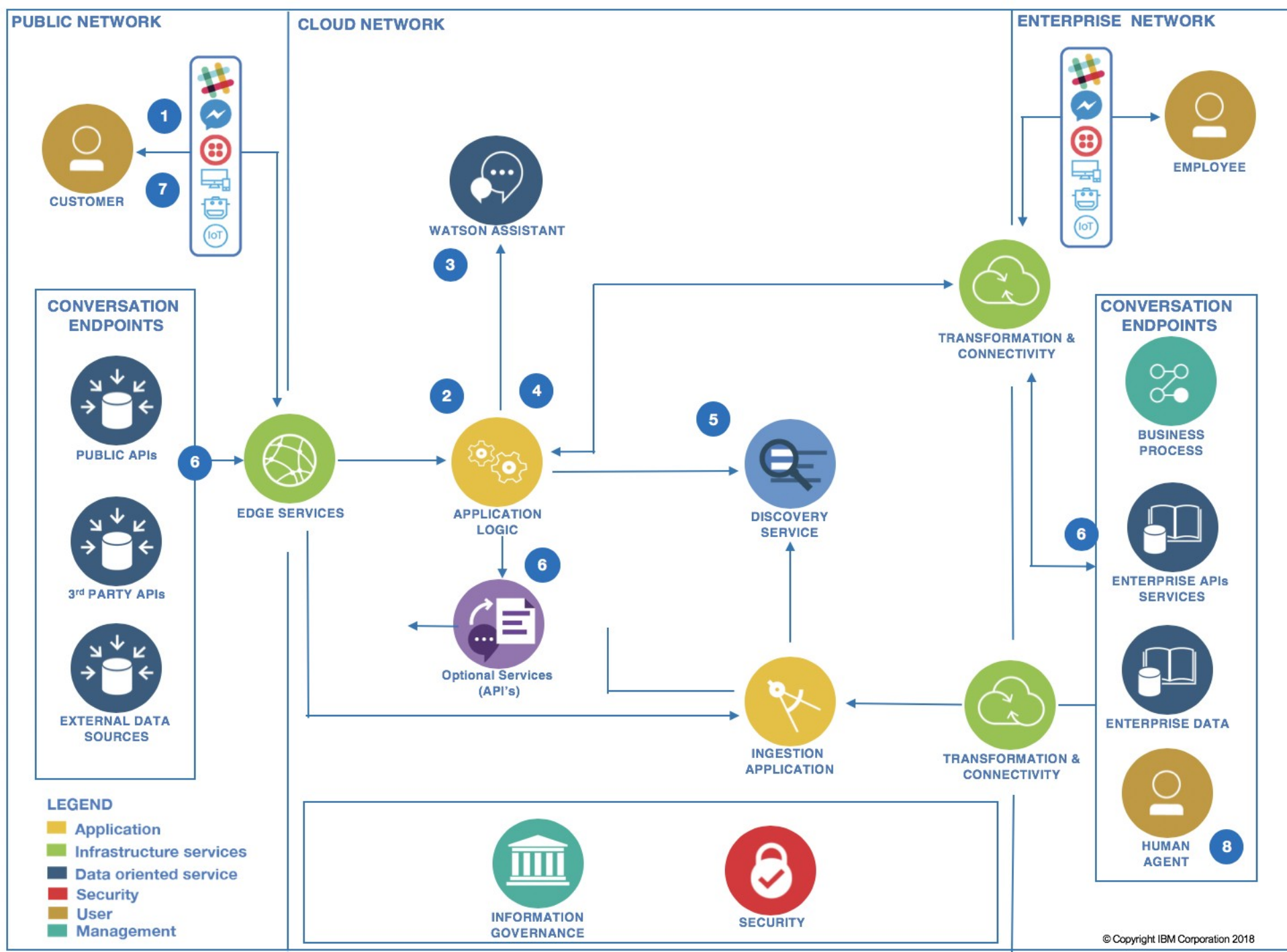
20K Customer advisors supported across 5000 branches
5200 Branches serving 65M Customers powered by Watson

Watson for Customer Care - Approaches

- Either, use a pre-built IBM AI Solution/Use Case
 - Customer Care Virtual Agent
 - Customer Care Voice Agent
 - Customer Care Agent Assist
 - Opt. Customer Care Agent Assist for Salesforce
 - Or, develop a customised roadmap based on Watson and Cloud
 - or any combination of the above.
 - Let's look at each Use Case in turn....
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Customer Care Virtual Agent

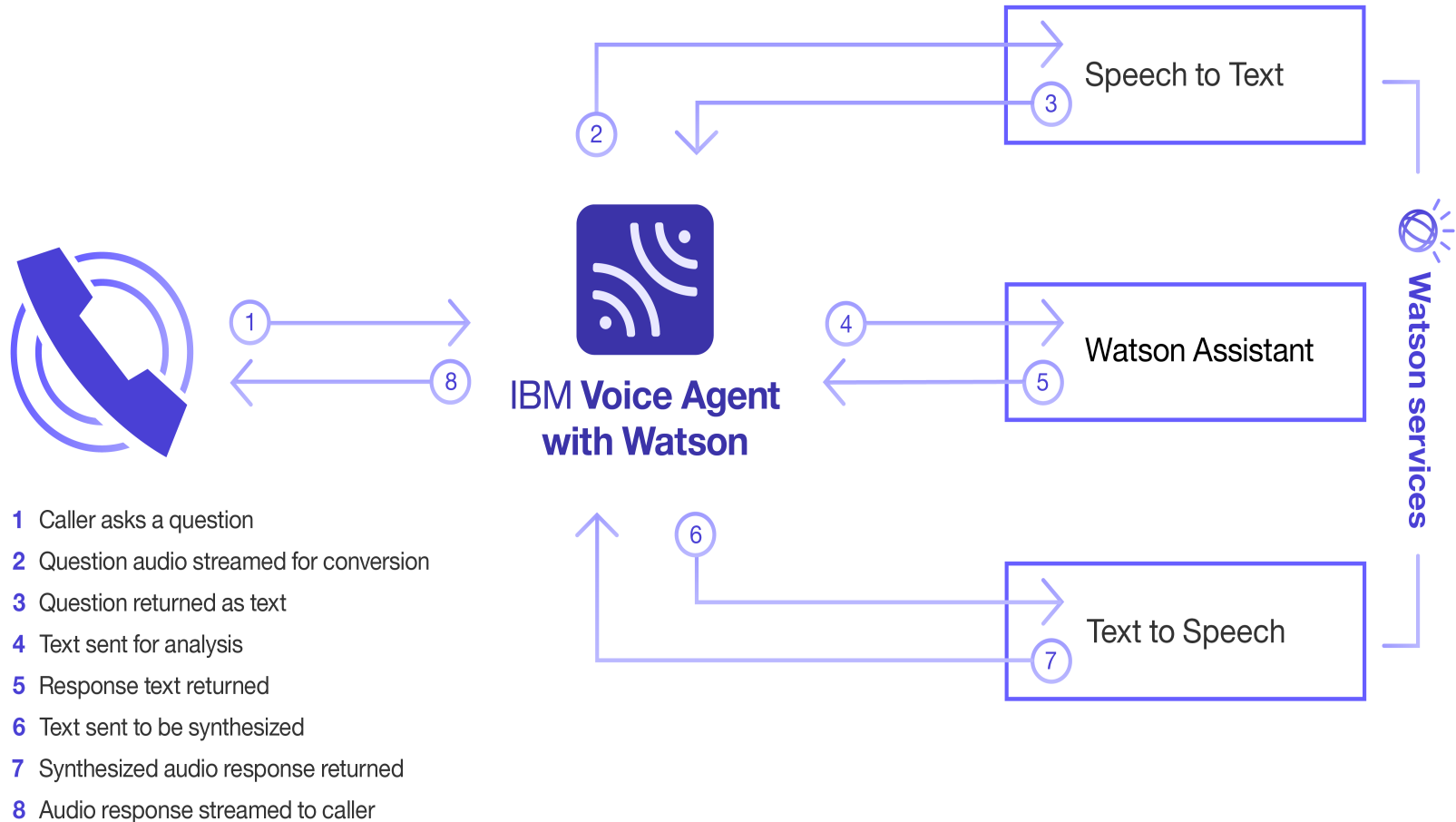
- Conversational and search capabilities and live agent integration.
- Understands questions in natural language across any type of digital channel.
- Search enables answers to complex questions.
- Components
 - Watson Assistant
 - Common interactions, routing and tasks
 - Watson Discovery
 - complex and broad questions with Disambiguation.
 - provides live agent handover without the loss of context.
 - Optionally
 - CCVA UI
 - Service Manager App
 - Solution Database
 - CRM System
 - Third-party Human Agent Support Platforms



Customer Care Voice Agent

- Integrate your telephone network to replace or supplement an existing IVR to interact with customers in natural language voice.
 - Offer personalised interactions
 - Seamlessly connect
 - Transfer calls to agents
 - Interact via text messages
 - Switch services mid-call including languages
- Components
 - IBM Voice Agent on IBM Cloud
 - Speech to Text
 - Watson Assistant
 - Text to Speech
 - Optionally, portions of this can be built on IBM Cloud Private via IBM Voice Gateway with Watson.

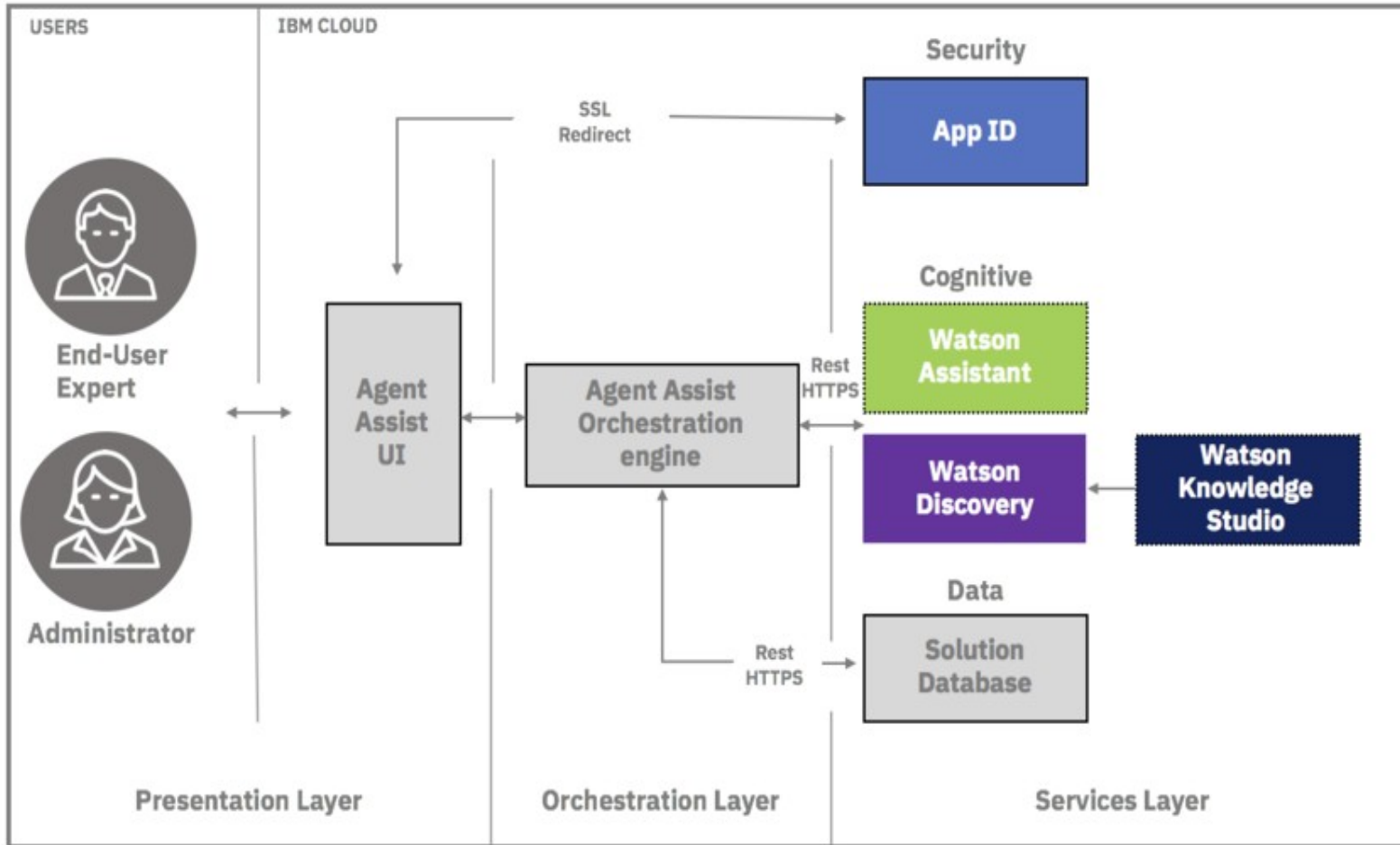
Customer Care Voice Agent



Customer Care Agent Assist

- Helps agents to find the right answers in the right context
 - improves agent responsiveness and first time resolution.
- Components
 - Watson Discovery
 - Unify data from diverse sources, enrich unstructured content with advanced text analytics, provide deeper understanding of documents and tables, retrieve answers as passages and documents and use machine learning to serve up the most relevant content.
 - Watson Assistant (optional)
 - Manage conversational interactions and FAQs in natural language with the agent. Determine if a question has a response based either on a modelled intent or on searching unstructured and structured content.
 - Watson Knowledge Studio (optional)
 - Create domain-specific custom models e.g. industry terms, to enrich unstructured content and extract custom entities and relationships in the data.

Customer Care Agent Assist



The solution is composed of **Watson Discovery, Watson Knowledge Studio, and Watson Assistant.**

Watson Assistant is optional depending on the type of interaction you are looking for – chat bot interface or database search engine interface

Watson Knowledge Studio is optional depending on whether or not the client wants to create a custom model for the terminology associated with their specific industry or company

Watson Case Studies

- Santander - banking
- Prudential - insurance
- Apple – visual recognition in apps
- KPMG - HR
- Kone - elevators
- Thomson Reuters – data privacy expertise
- Autodesk – customer support
- E&J Gallo Winery – irrigation
- Plus RBS, Orange, Autodesk, Lloyds, Sprint, Vodafone, Honda

Approaches to Getting Started

- What are your objectives?
 - Save money? Improve Cust Sat? Extend Hours? Train Agents?
 - Choose a type of customer request
 - Product information, change of password, opening hours, etc.
 - Choose an approach
 - Offload standard tasks or pre-agent tasks, support the agent...
 - Choose one or more channels
 - Voice, IVR, SMS, but probably Web chat
 - Start with Watson Assistant
 - Add Discovery
 - Add Voice
 - Add back-end integration with IBM i and others
-

Watson Method for Systems Integrators

- Solution Outline
 - Requirements Validation
 - Solution Design
 - Configure & Train
 - Question Collecting
 - Create Ground Truth
 - Dialog Configuration
 - User Interface
 - Test & Optimise
 - Iterate back to Config & Train
 - Deploy & Manage
-

Tips

- Allow 4-6 weeks to get started with chat
 - Understand the objectives and reflect them in the design
 - Who is the customer – Age? B2B or B2C? Prospect?
 - What are they trying to achieve - Buy? Learn? Password reset? Complain? Find a store?
 - What is the VA to do - fix? sell? advise? re-direct?
 - Who is the VA – An employee? A trusted advisor?
 - Speak in the style of your brand (e.g. Virgin vs. Coutts)
 - Don't try to pretend to be human
 - Train it on the words of your industry (from IBM) and your products (from you) and your history (from you)
 - 'Lean forward'/'lean back' – proactive to sell, not to help
 - Get advice from an SI – probably the only help you need
-

Steps to set up Watson Assistant

- Sign up & Log In
 - Create IBM ID
 - Create IBM Cloud ID
 - Log into Cloud Dashboard
 - Create Resource > Watson > Watson Assistant
 - Create & name Service > Select Pricing Option > Launch > Create a Workspace
 - Create intents (find store) & entities (locations)
 - Build your dialog
 - Test your dialog
 - Deploy
 - Slack, Facebook Messenger, Web App URL, App ...
 - Improve
-

Watson Assistant Pricing

- Lite - 'Kick the tires and try us out'
 - Free. 'Kick the tires and try us out'
 - 10,000 messages/API calls per month
 - 5 skills/workspaces. 100 dialog intents/nodes
 - pay only for the call minutes and daily concurrent calls that you use - first 1,000 minutes and 2 concurrent calls per month are free
 - Standard - 'Build an MVP that gets the job done'
 - 0.0025 USD/message
 - Unlimited messages/month
 - 20 skills/workspaces. 10 versions per skill
 - Unlimited dialog nodes
 - Also Plus, Premium, Deploy Anywhere and 30-day trial
 - New: Phone Plus
 - \$0.065/min.
-



Summary & Close

Summary

- IBM Watson can improve your Customer Care
 - It doesn't cost a lot
 - It doesn't take a lot of effort to try it
 - You can build up gradually from there
 - You only need external (SI) help to take new steps, not for every instance
-

More information

- IBM
 - www.ibm.com/watson/se-sv/call-center-ai/assessment
 - watson-assistant-demo.ng.bluemix.net/
 - developer.ibm.com/code/category/watson/
- Typex
 - www.typex.com

Next Steps

- Take the IBM Call Centre Assessment
 - Show your team the demo
 - Foils will be on i-UG Website
 - Questions now?
 - 14:25? I will stay behind. 5 mins to next session in Manders
 - Leave a business card for
 - Contact Centre discovery form
 - Watson demo/evaluation
 - Free staff education session on site (i-UG members only)
 - (Just pay for travel)
 - john_taylor@typex.com
-