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The bridge to possible

Conversational Artificial Intelligence Virtual Assistant with Full Stack Observability

Driven by Data, ML/AI models, User Experience Design, and Research

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BRKOPS-2644

Agenda

- Virtual Assistant- VA
- CX-Cloud Virtual Assistant
- Conversational VA FSO
- Knowledge sources & Empathy Generator
- Demo

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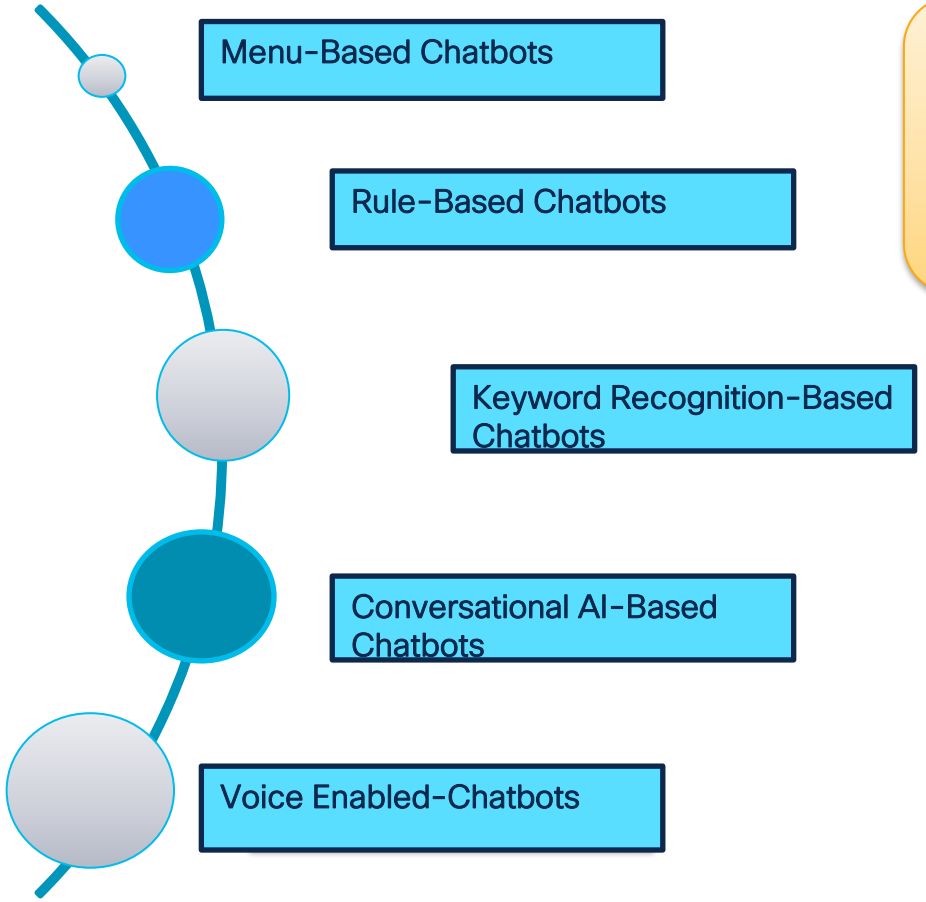

The Evolution of Chatbot(VA): From Origin to Conversational AI

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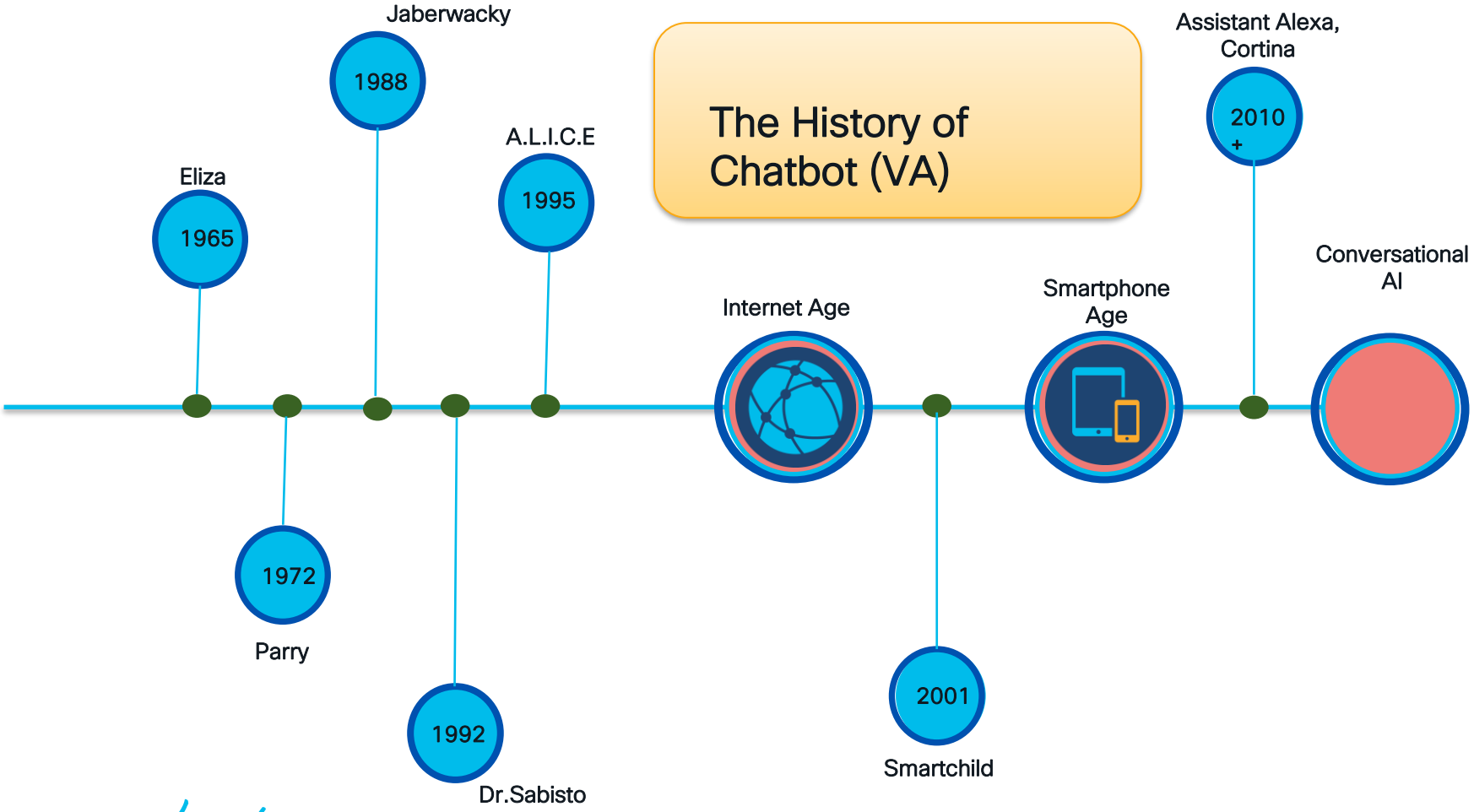
The History of Chatbot (VA)



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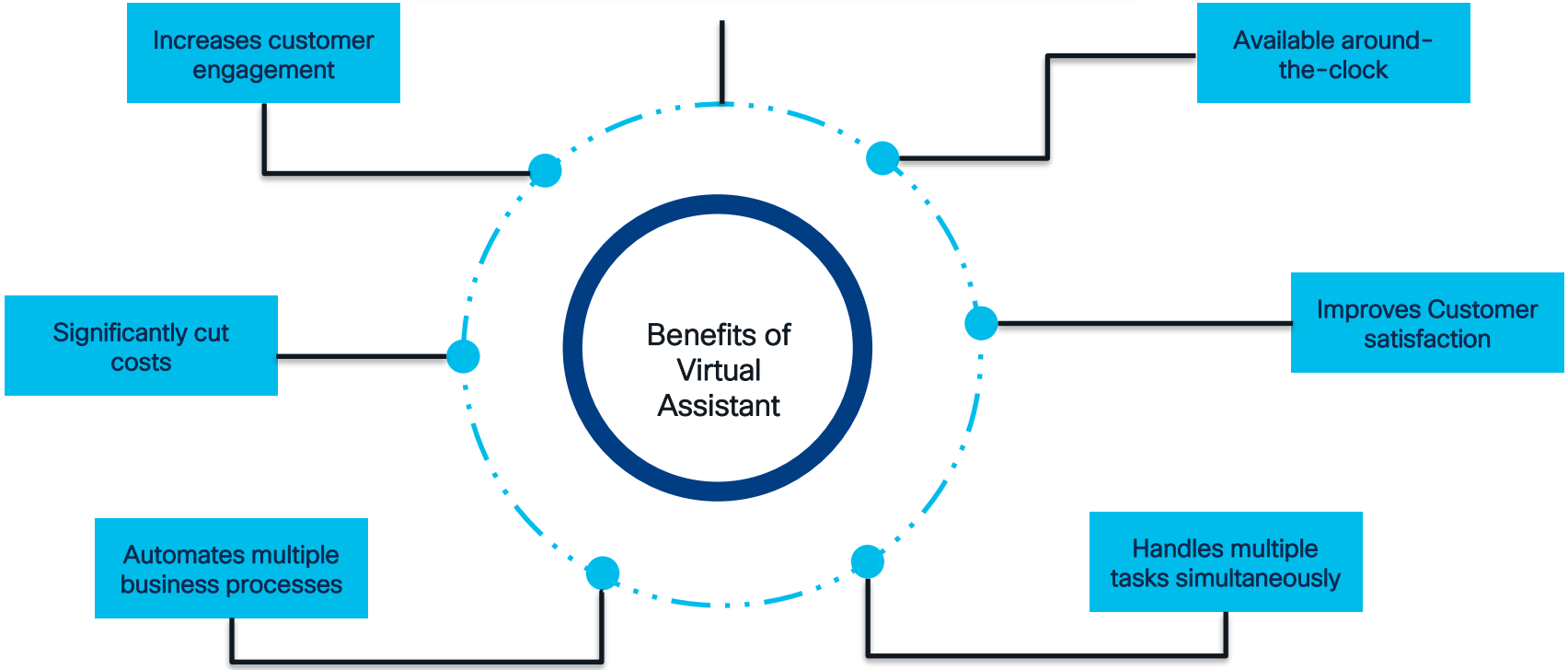
Importance of Virtual Assistant



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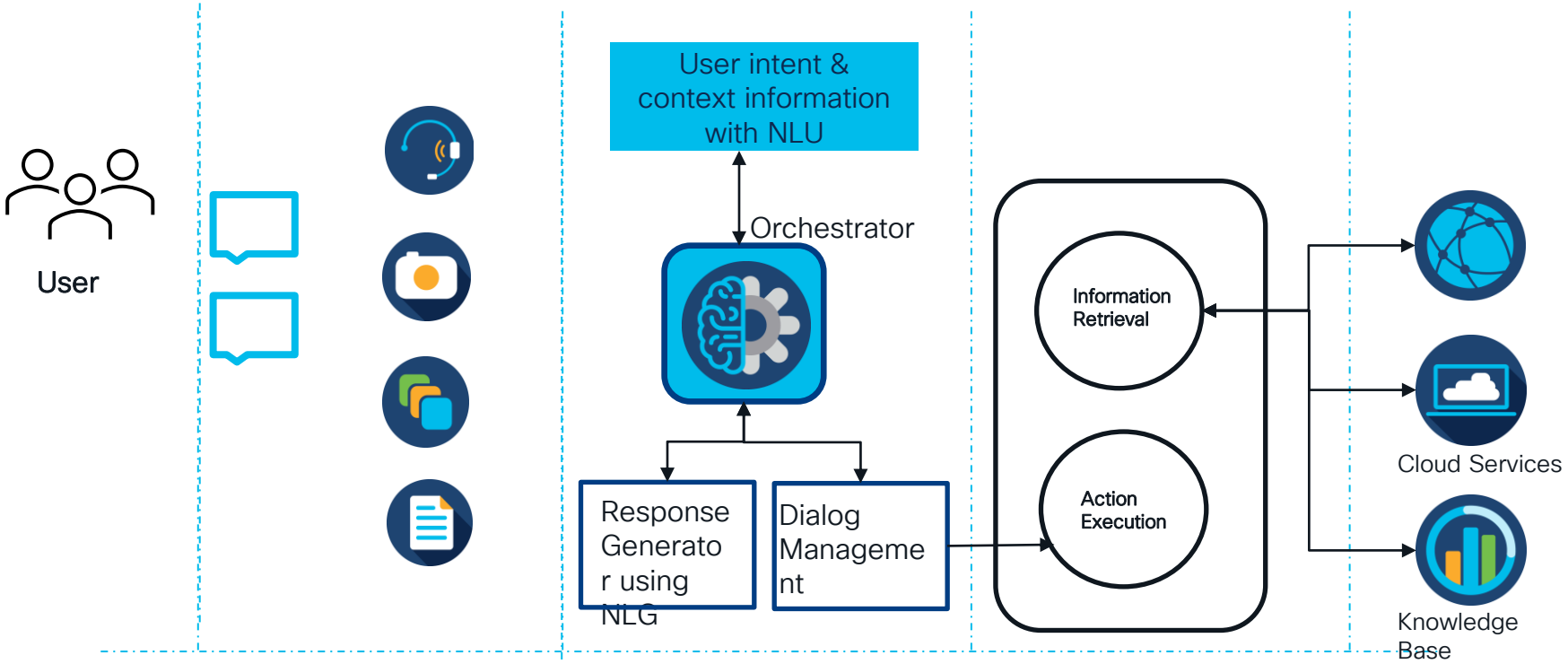
Basic Virtual Assistant Architecture



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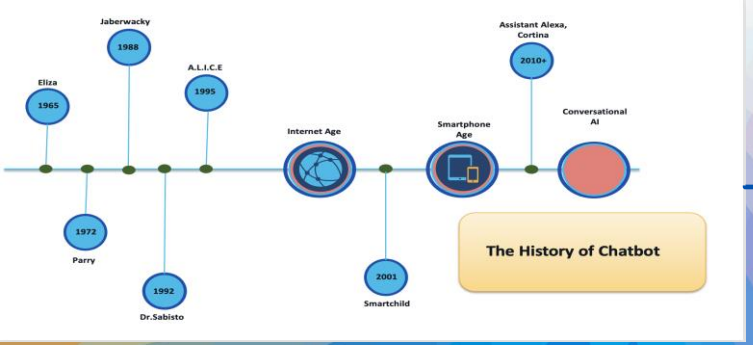

Objectives of CX-Cloud Conversational Virtual Assistant Full Stack Observability

CX-Cloud VA is about

On time support & Improve Customer Experience

Improve Efficiency & Personalized Experiences

Consistency & accurate Response

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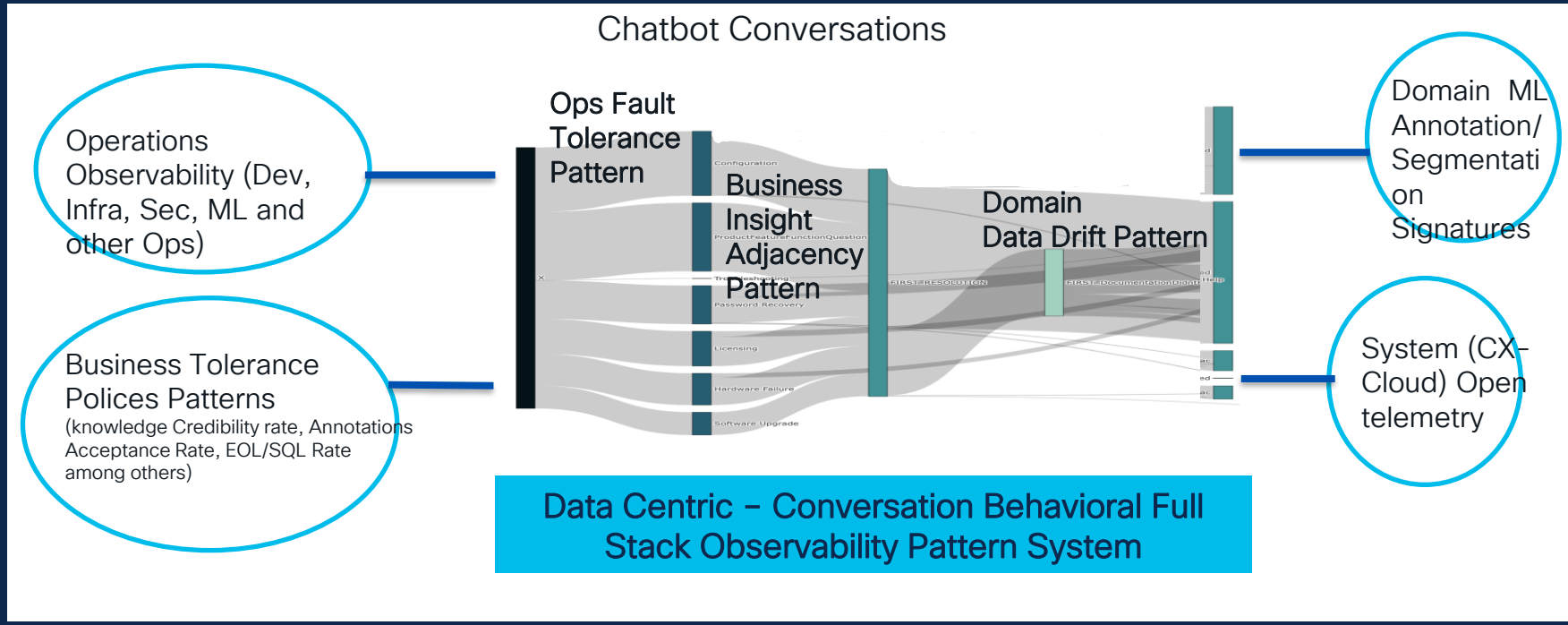
Data Centric Conversational Behavioural FOS Pattern System



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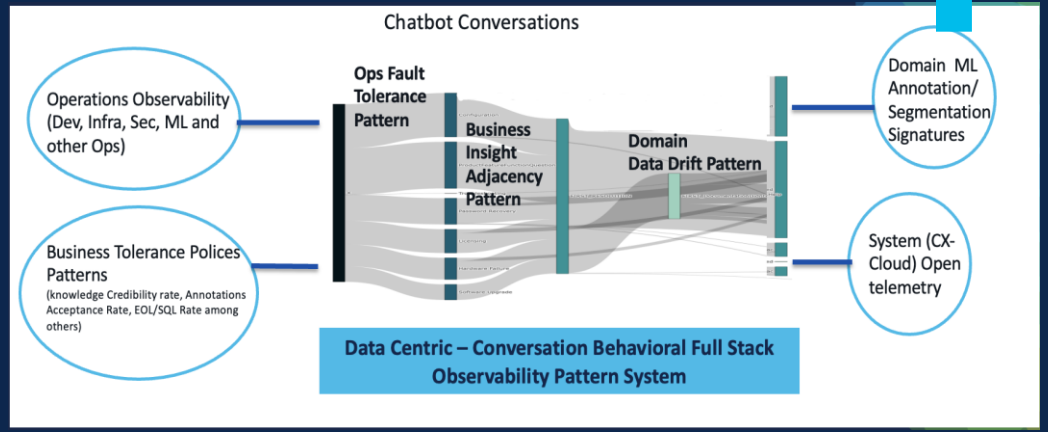
Domain ML Annotation



- Cisco Products , Services, Solutions
- Cisco Personas
- Cisco On-prem/Off Prem Tax

Data Threading through close proximity hierarchical relationship between the Taxonomies, Ontologies.

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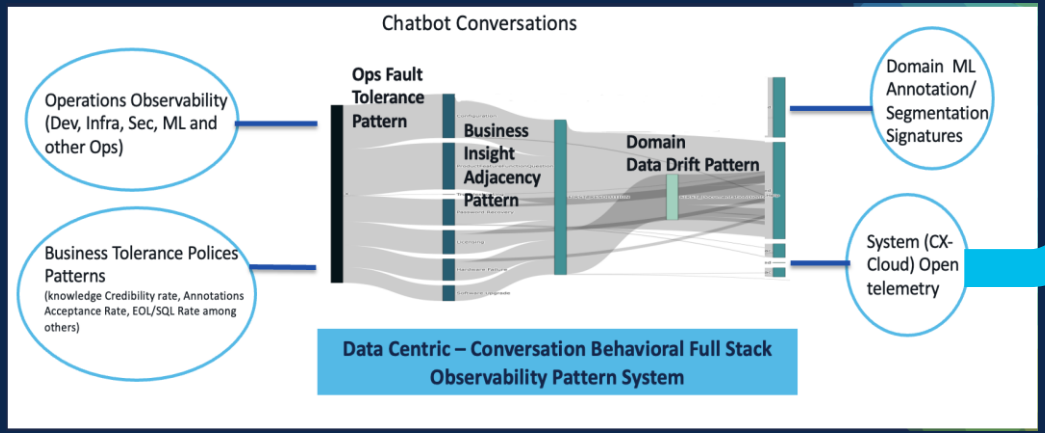
CX-Cloud Open Telemetry



Extraction of Telemetry data from sources such as:

- Data Trace paths and hops.
- Interactions between different components and tools, sources of data generation Eg. metrics, logs, volumes, etc

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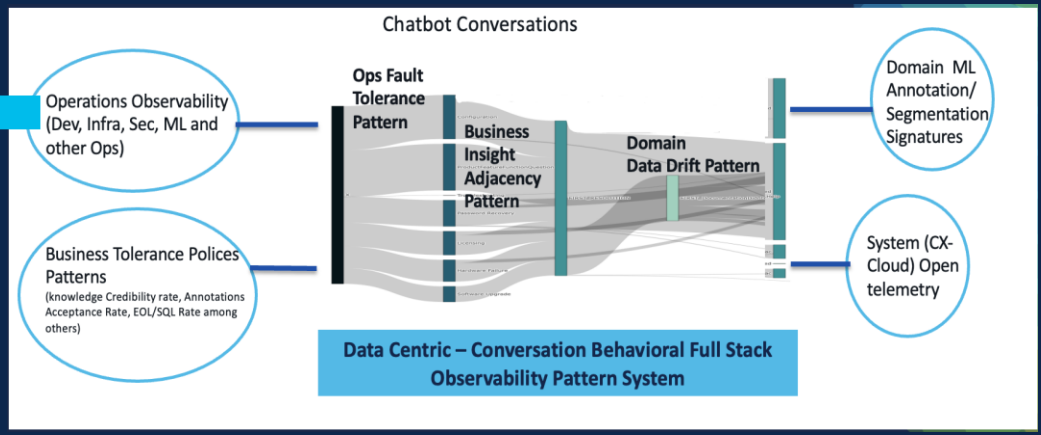
Operations Observability

- Api
- Connects the Sales
- Finance
- Order
- Security (Accesses, Attempts etc)



Operational Observabilities covers all the layers such as Development, Infrastructure, Security, Machine Learning and Operations, that drives the conversation

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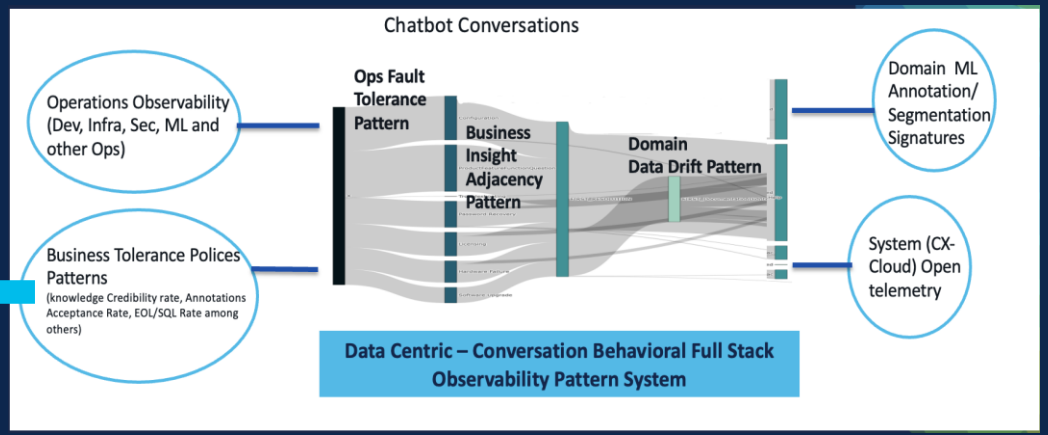
Business Tolerance Polices Patterns

- Golden rules,
- Rules driven processes
- Privacy Retentions,
- PII,
- Data Governance



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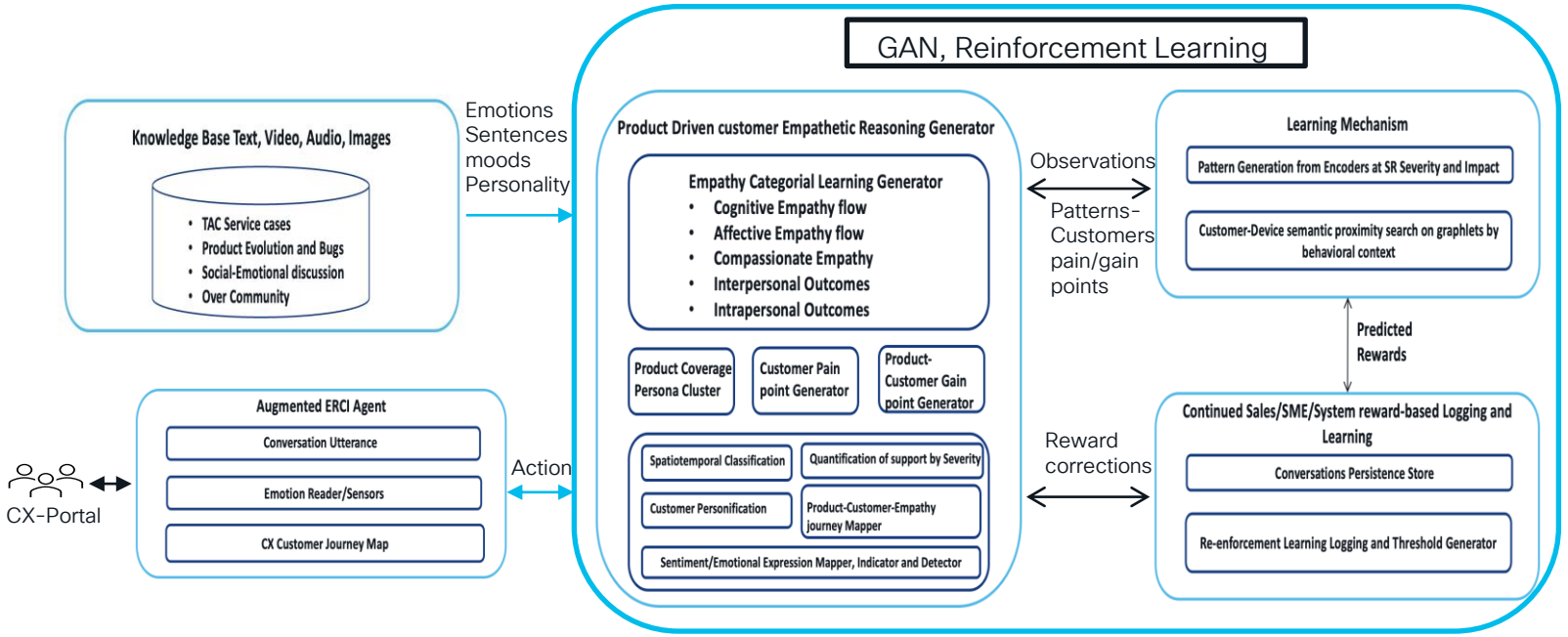
Conversational VA Domain Knowledge Mapping & Compassion Learning



Sample Outcome of intermediate empathy map generator from Service Requests

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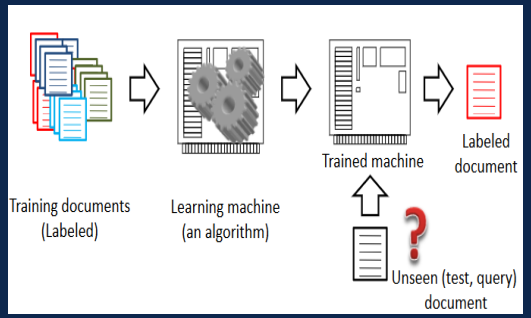
Various Learning Strategies (Algorithms) using by Conversational VA



Statistical Model	Text Embeddings (TF, IDF, BOW, FastText, etc.
Dynamic Models	Markov Chain, SVM, NER
Deep Learning Models	T5, BERT, RoBERT, Knowledge based recommendation
LLM models	Cisco Enterprise - GPT

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Demo

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FYI.. Session on FSO at Cisco Live 2023

Watch my session

Allie Brenner,
Bruno Franca, &
Sergei Pakhomov

Full Stack Observability – Monitoring and troubleshooting a sample application

LABCLD-1011

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Thank you

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