



Cognitive Contact Center

Catalyst Project

May 14-17, 2017 – Nice, France

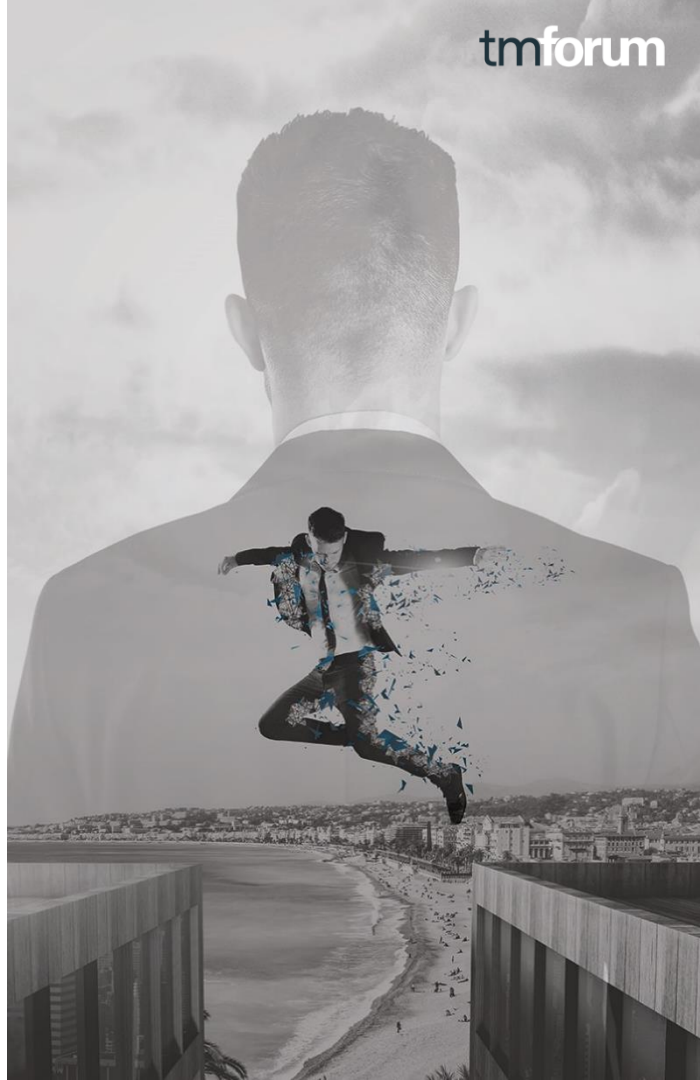
Telefonica



NOKIA



tmforum



Telefonica

Project Champion



an NTT DATA Company

Project Leader

Systems Integrator

everis Virtual Assistant

Unified Service Desk



technologies

API Management

API Portal

Service Virtualization



Voice Recognition

Text To Speech

NOKIA

Service Management Platform
(HADA)

_Market Drivers



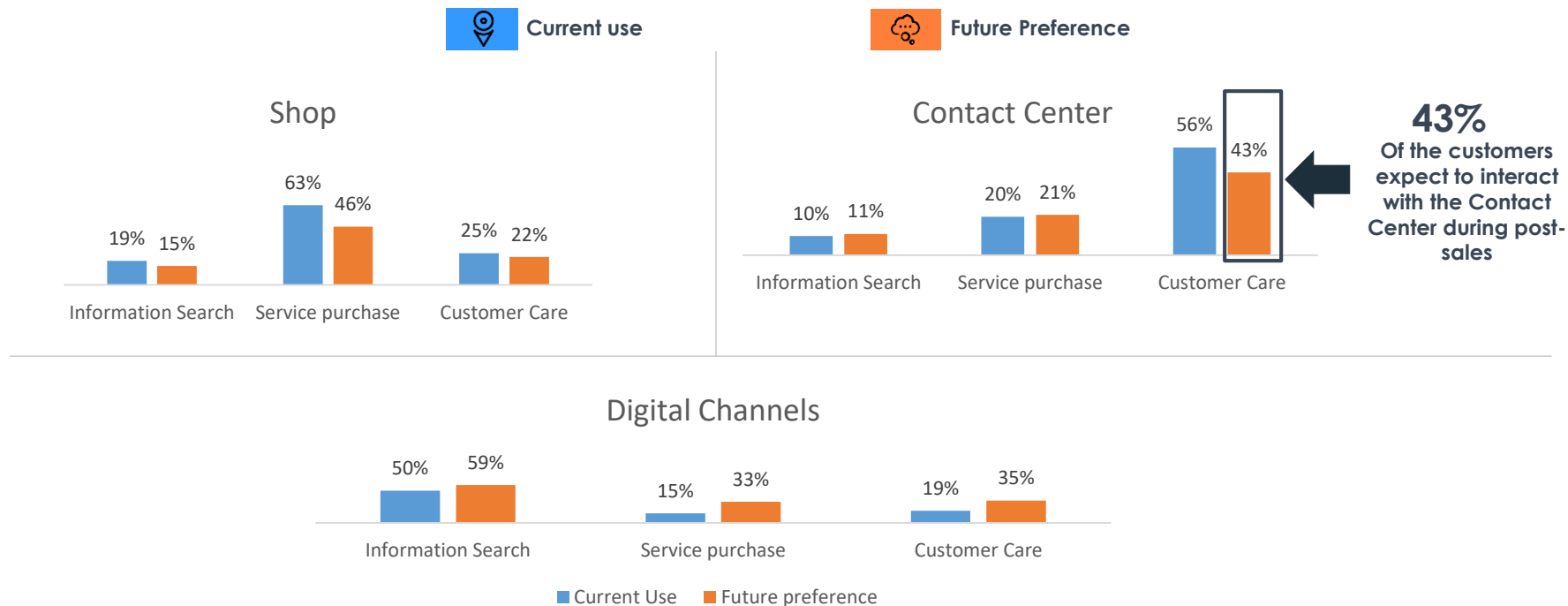
The 2020 CSP: end to end digitalization

- We live in a **Digital World** where **technology**, the **new “how” of doing things** and being **customer centric** have become a **success key factor**
- The Telecommunication Industry is aware of this digital wave where **digital giants OTTs have shaken the status-quo** capturing incomes and hitting CSPs margins
- At the same time, CSPs face the challenge of **fulfill digital natives** and non-natives expectations and reduce operational costs
- Today technological disruptions, industries convergence, CSP global scale scalability and brand value represent a **great grown opportunity for CSPs**

To make it happen, CSPs must become a real player in the Digital World ensuring the Customer Engagement

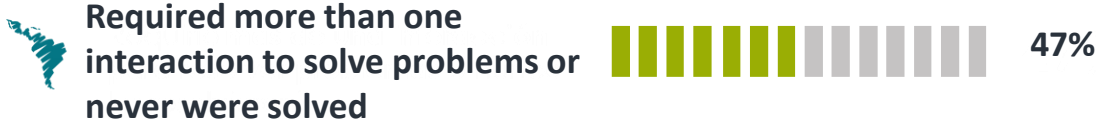
The 2020 CSP: assuring the engagement with customer

Telecom customers expect to **duplicate the use of digital channels** but **at the same time**, they consider the **Contact Center as the preferred channel** for customer care interaction in the future

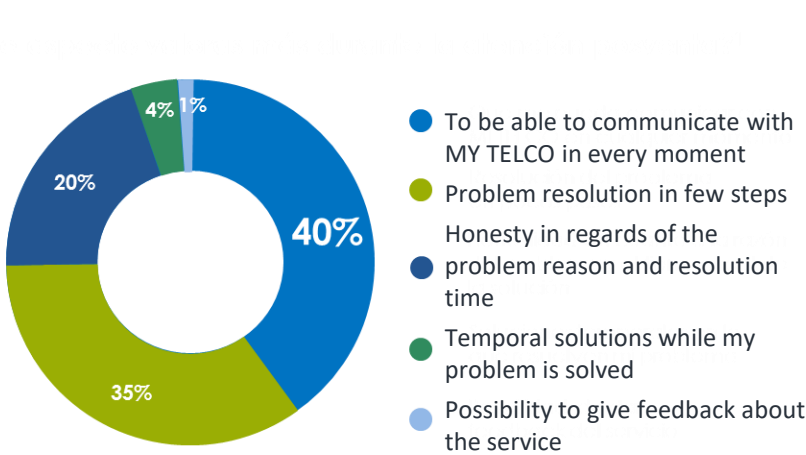


The 2020 CSP: ensuring the engagement with customer

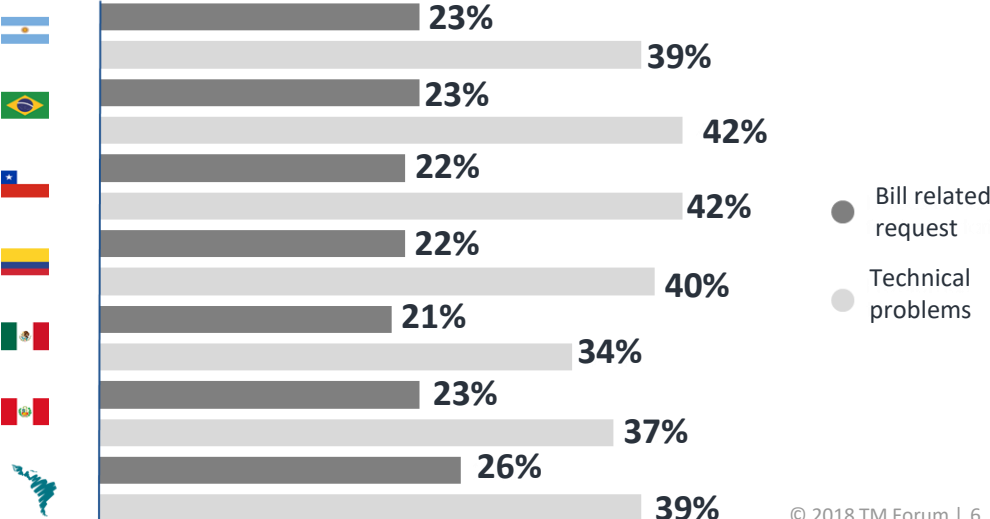
DURING post-sale, customers seek care in every moment and agility; this puts a demand on CSPs to be proactive and to anticipate problems



What aspect do you value the most of the customer care?



Main causes of customer interaction:



_the challenge



Contact Center represents one of the channels with the **greatest number of customer interactions** and it is estimated to be the **preferred channel for customer care** in next years.

We have two main challenges in this channel:



Improve customer experience

- **Accessibility and resolution capabilities** by automating complex customer journeys.
- New generation of **digital native customer** with increasing **digital expectation**.



Reduce cost

- **OpEx in Call Center** is one of our **largest expenses**, even with a decreasing trend driven by operational improvements.
- Digital channels migration initiatives have gradually **less impact** in overall **cost reduction** and increase the cost per call.

The introduction of **cognitive capabilities in our Contact Centers** represents an **opportunity** to significantly change the way in which we serve customers, **enabling those both drivers**:



Improving customer satisfaction by means of more humanized, personalized and natural voice interactions.



Driving **savings in OpEx** by means of more efficient interactions with a high level of automation.

_goals

- **Standardize and homogenize** the different channels, avoiding human discretion
- **Simplify** of the model
- **Get Efficient TMO**
- **Agility** in the response to the customer

_tools

- **Natural Language Processing**
- **Cognitive Engines**
- **Speech Analytics**
- Complete and accessible **knowledge bases**
- Clear and voice compatible **criteria between automatic responses (bots) and agent support**

_Cognitive Contact Center



Cognitive Call Center: vision

We envision a Cognitive Contact Center that truly engage native and non-native digital customers enabling a complete omnichannel digital customer care



ALWAYS
AVAILABLE



COGNITIVE
(no menus)



NO QUEUES



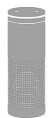
PREDICTIVE



SENTIMENT
ANALYSIS



PERSONALIZED



SMART
ASSISTANT



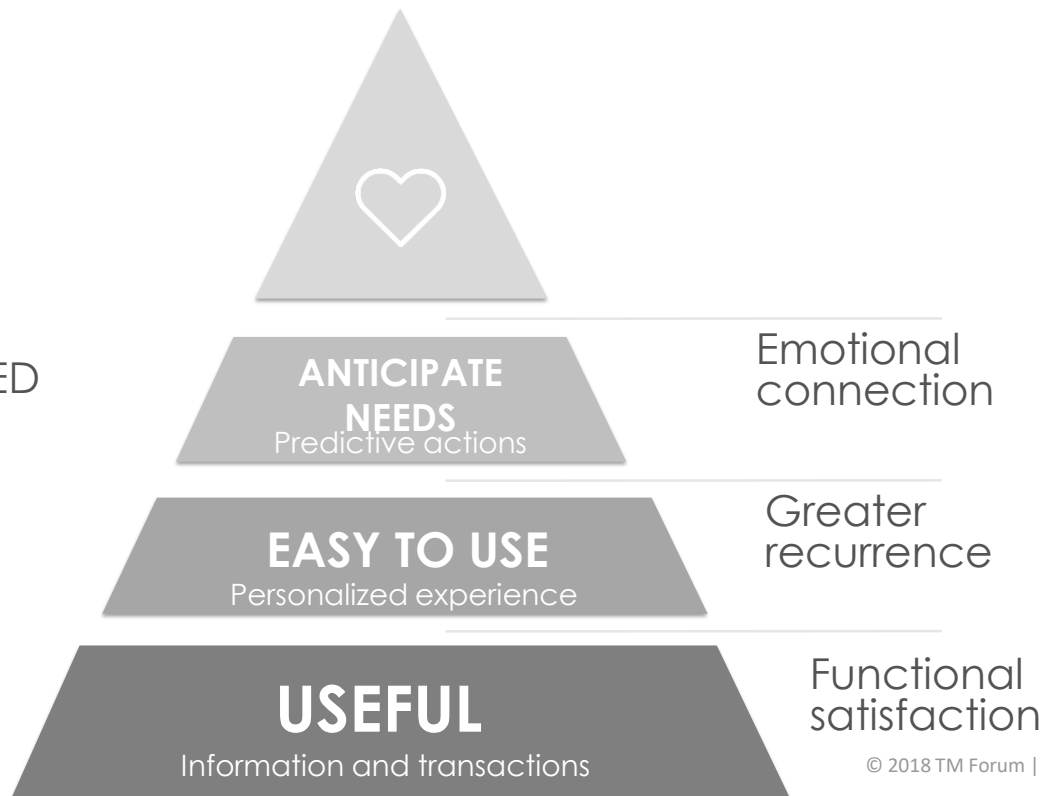
ANALYTICS



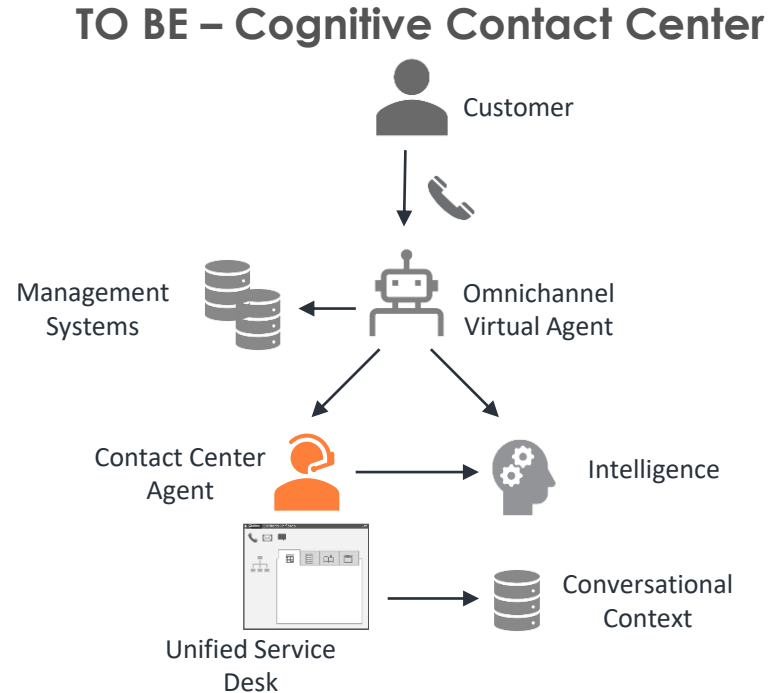
END TO END



COSTS
REDUCTION



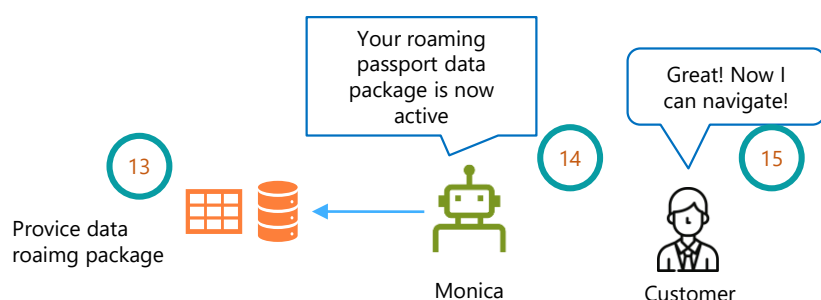
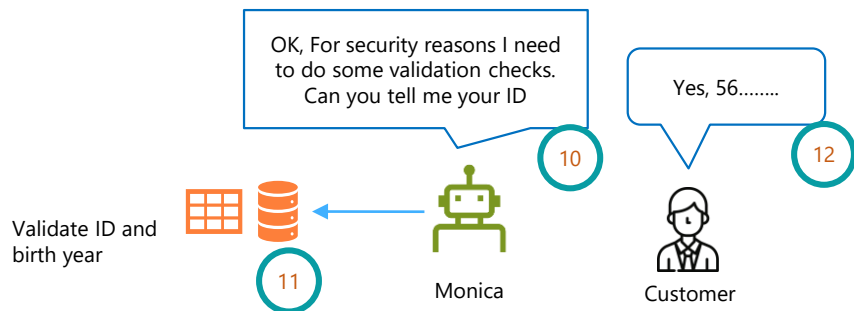
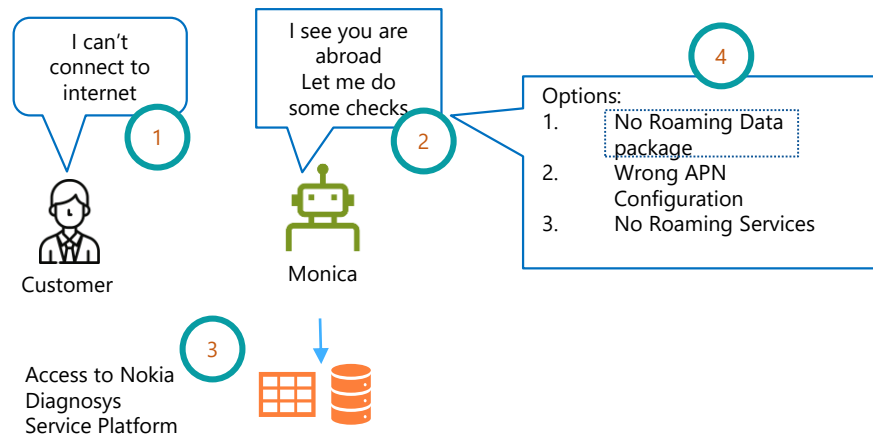
Our approach for the Cognitive Contact Center is based on the **continuous** and **progressive** implementation of use cases to be **moved** to an omnichannel Virtual Agent



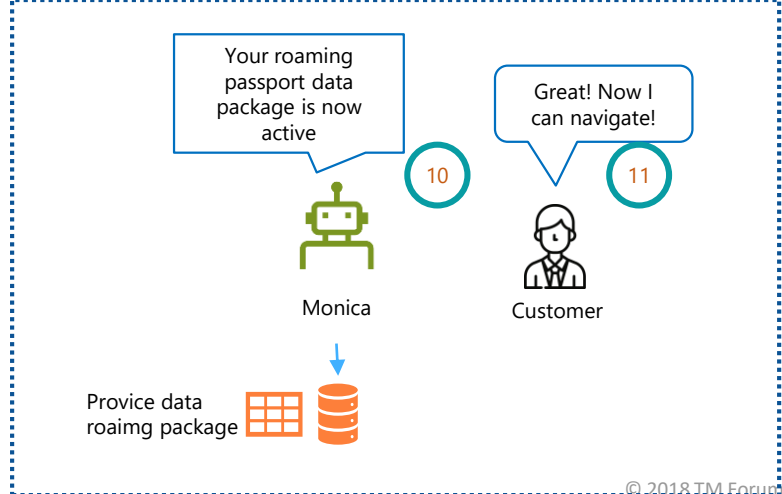
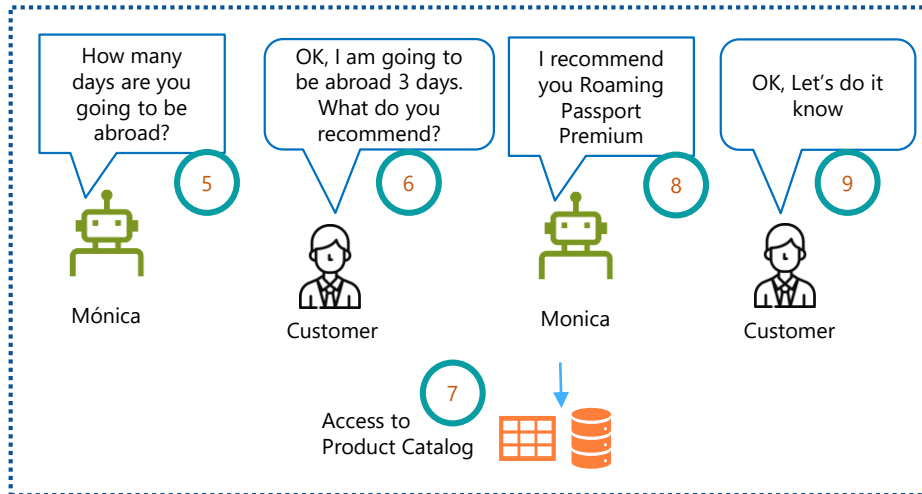
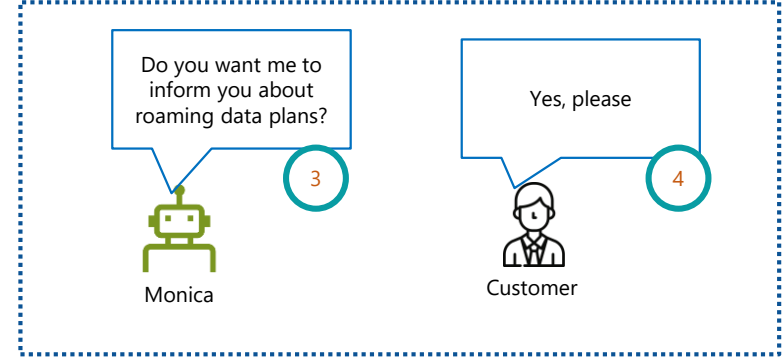
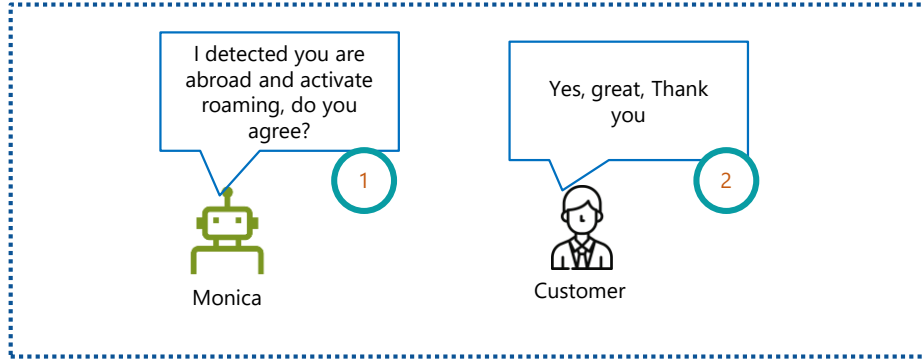
_Use Cases



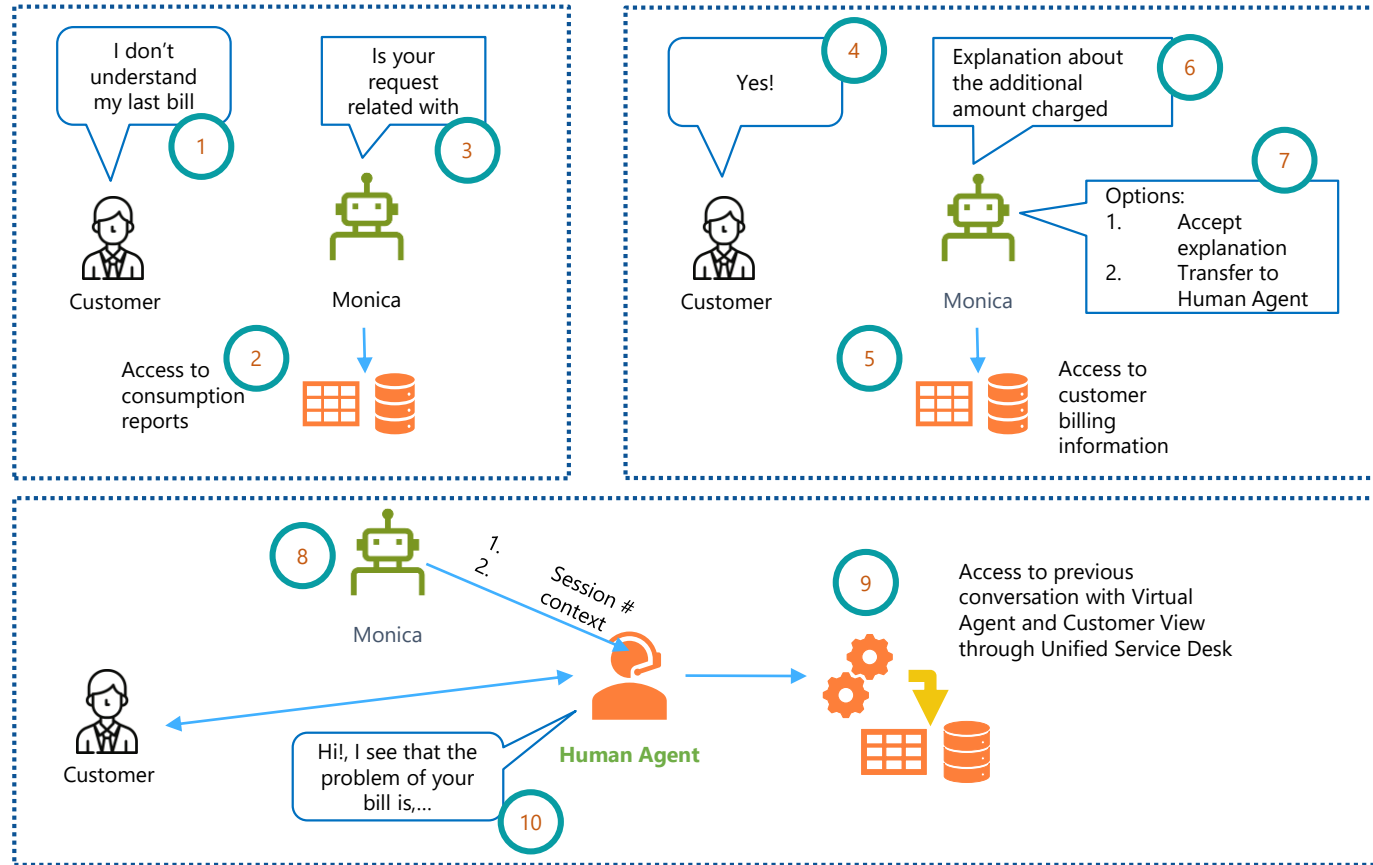
Problem with data streaming service – Inbound (No Roaming Data Package)



Problem with data streaming service – Outbound



Billing information request or claim

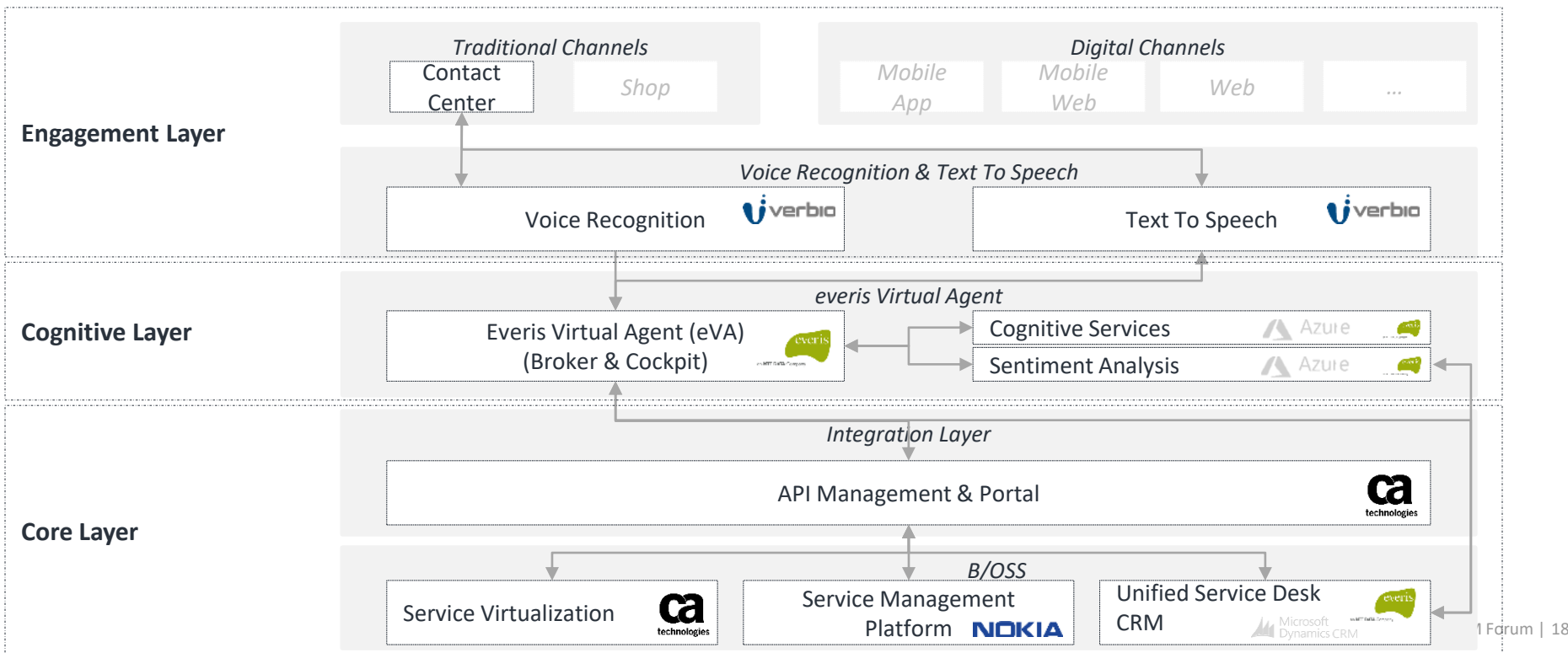


_Architecture

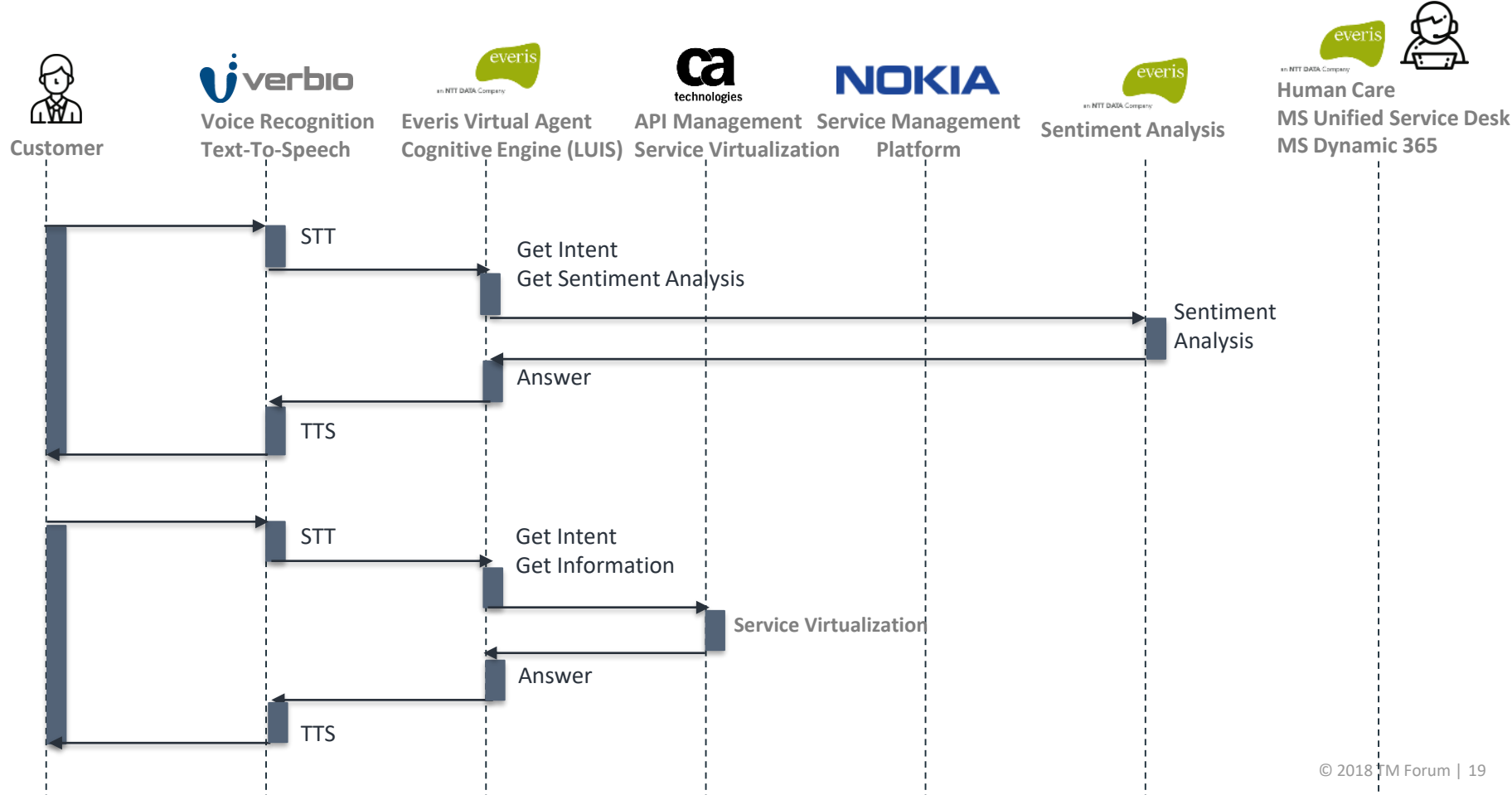


Cognitive Contact Center: High Level Architecture

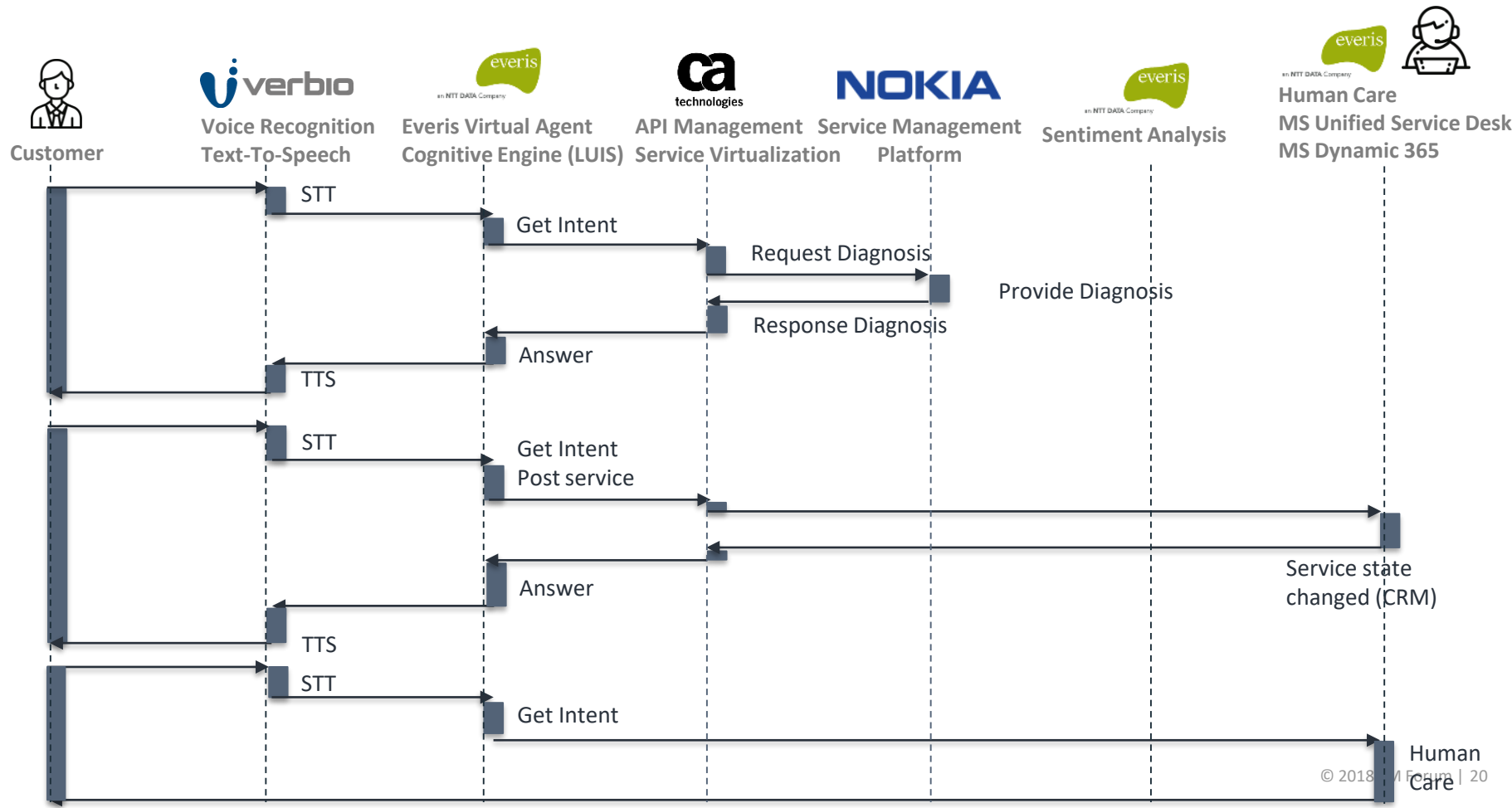
The **architecture components** of this initial Catalyst phase are **totally connected** and it could be possible to **deploy** them **in the short term**. In fact, it has been possible to enable them leveraging existing implementation across Telefonica Group operations



Cognitive Call Center: Technical Flow



Cognitive Call Center: Technical Flow



Cognitive Call Center: TM Forum OPEN APIs

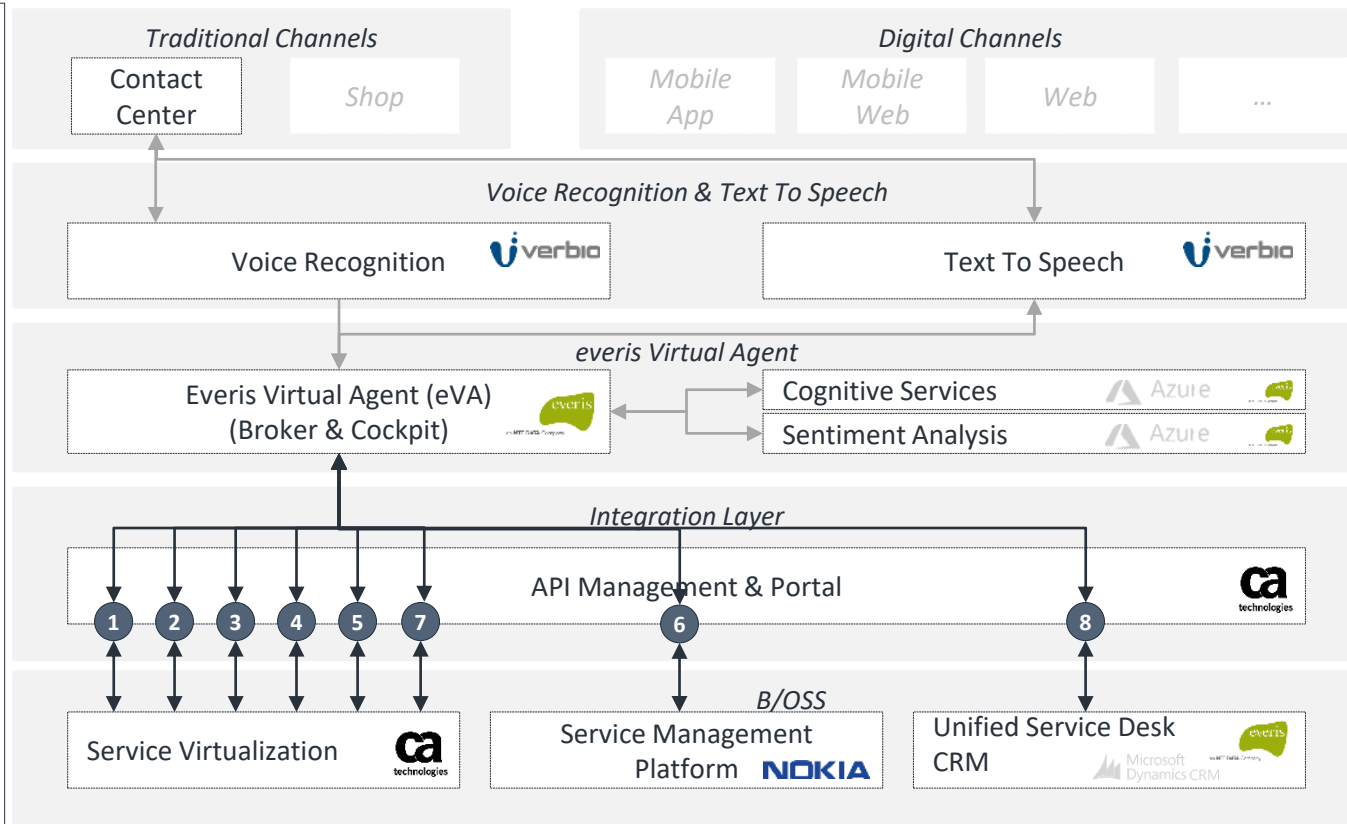


tmforum

8 TM Forum OPEN API supported

TMF Open API's

- 1 Party Management REST API
GET /PARTYMANAGEMENT/INDIVIDUAL
- 2 Resource Inventory REST API
GET /resource
- 3 Product Catalog Management REST API
GET /productOffering
GET /productSpecification
- 4 Product Inventory REST API
GET /product
- 5 Billing Management REST API
GET /appliedCustomerBillingCharge
- 6 Service Problem Mgmt. REST API
GET /serviceProblem/
- 7 Usage Consumption REST API
GET /usageReport
- 8 Product Order Mgmt. REST API
POST /productOrder

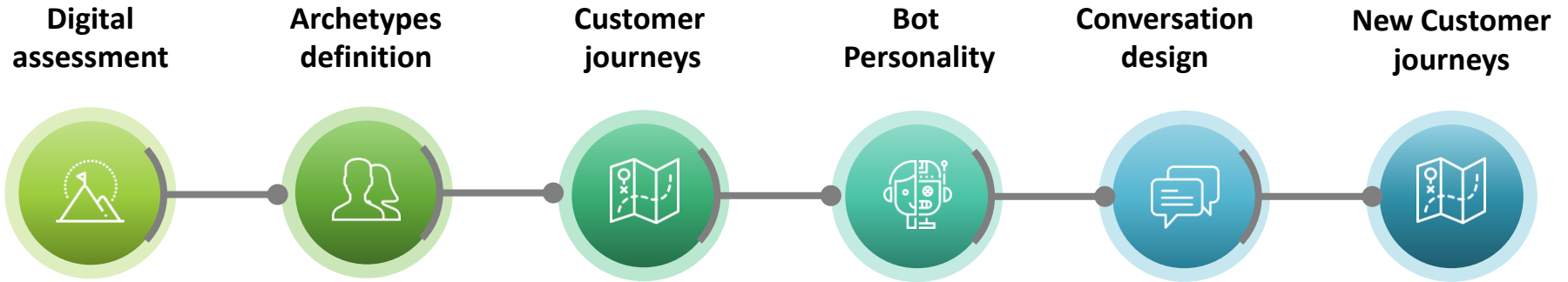


_Methodology

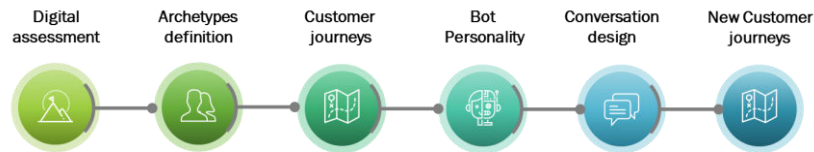


Our Conceptualization Methodology

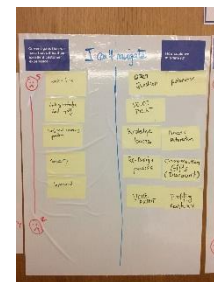
To achieve such **fast results**, it has been mandatory to have a **new way of doing things**, considering new design thinking techniques that enabled a more **innovative** and **agile** vision:



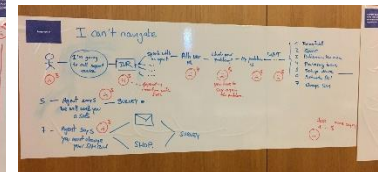
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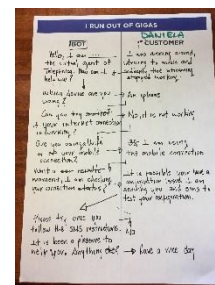
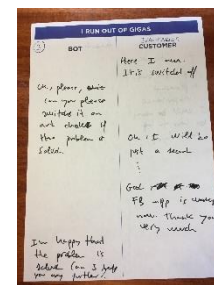
Archetypes



Customer Journeys



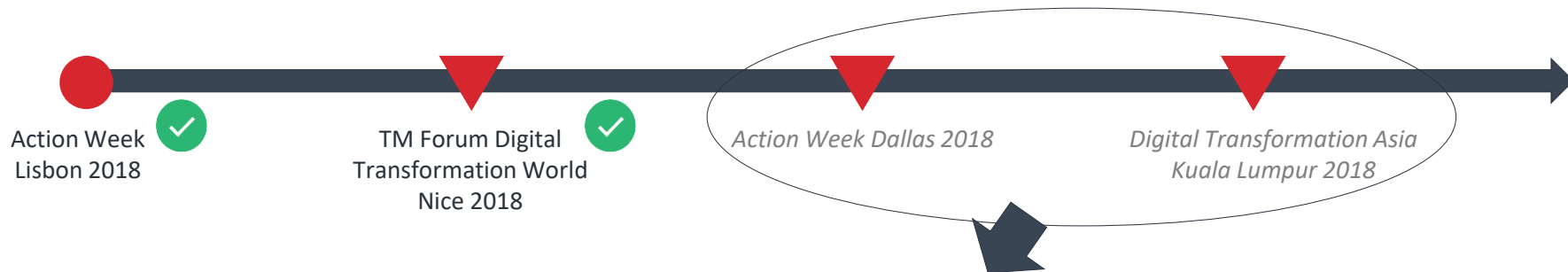
Bot Personality



Conversation design

_Next Steps





- More **complex use cases** that require the development of **new capacities** through the use of **RPAs**.
- **Data Intelligence** use to increase the level of outbound interactions and offer advised up-selling and cross-selling products.
- Integration of **Identity Management** mechanisms, such as voice biometric authentication
- Enable the concept of “**User Lifecycle Management**” that will allow users to access to customer services and manage them
- **Omnichannel Experience**, by **extending the channels** the customer may interact through ensuring a unique and integrated experience for the customer
- **Augmented Reality**, allowing the customer to interact with **physical devices** (e.g.: home router) through the support of a Virtual Agent
- **New revenues streams**: Possibility of finding alternative ways for CSPs to generate revenues by providing “Cognitive Contact Center” as a service

