



#### **CONTACT CENTERS: GROWTH & INNOVATION**

## THE ONLINE PATIENT: HEALTH IN THE IOT AGE

Rogério Neiva

Senior Account Manager Altitude Software





#### THE CHALLENGE > CONTACT CENTER FOR THE NATIONAL HEALTH CARE SYSTEM IN PORTUGAL

Since May 2016, PT Empresas BPO is responsible for the largest Health Contact Center in Portugal, SNS24 (National Health Service 24)

The brand is well known and used to by all residents in Portugal with English support for foreign residents

Because of its responsibilities, it is key whenever there is an epidemic problem like influenza, chicken pox, ...

It was the first partnership between PT Empresas and Altitude







#### THE CHALLENGE > CONTACT CENTER FOR THE NATIONAL HEALTH SYSTEM IN PORTUGAL

#### **Healthcare Network**

Patients do not always know where to go to treat their health problem

Hospital emergencies full of non-critical situations

Patients wait for hours to be attended

#### CONTACT CENTER 24 HOURS / 365 DAYS PER YEAR

Appropriate & correct referral for each health problem

Guarantees financial benefit if the patient is referred from SNS24

Cares for & monitors patients at home using outbound calls

#### The costs

Answering a call is typically 10 to 20 X (7,5€) cheaper than providing the service on the National Health Network (Emergency ~ € 120)





#### NATIONAL HEALTH SYSTEM – SOME NUMBERS

- 9,8 out of 10 persons use and recommend SNS24
- 10% of the calls are from persons who are lonely, just that
- There is always a pharmaceutical on duty because of poisoning
- Around 800 nurses with part-time jobs
- SNS24 does several thing today:
  - Clinical triage
  - Medical information (vaccines needed for travel for example)
  - Appointment of medical consultations
- In the short-term roadmap
  - Video medical appointments
  - Knowledge database





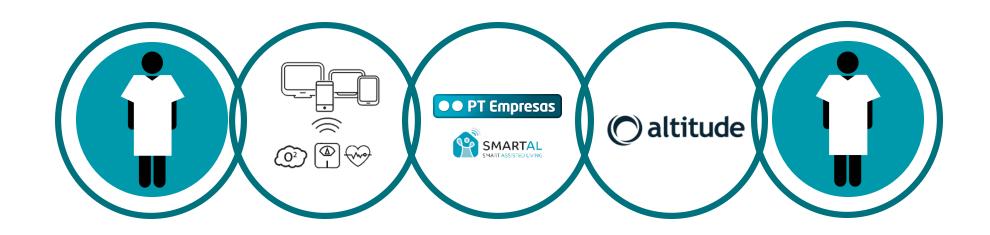
# INTRODUCTION TO SMART ASSISTED LIVING







#### THE CONCEPT OF TELEMONITORING







#### SOME OF THE DEVICES IN USE

#### Medical devices communicating by Bluetooth



Oximeter FORA PO 200





Tensiometer
FORA Diamond CUFF BP





Tensiometer FORA Active Wireless Plus



Glucometer FORA Diamond Mini



ECG Heartview 12L

Any medical device with Bluetooth connection is capable of integration prior testing and certification. Other devices already integrated: Xiaomi MiBand1S, Cobas\_h\_232 (NT-PROBNP), Vidonn X6





#### The SmartAL Platform

- It is a technological platform
   designed by the Altice Labs in
   Portugal, focused on the
   management of health processes
   and actions as well as social support.
- It enables, among others, services of telemonitoring of vital signs as well as the support of daily activities related to health, welfare and safety of people.





#### WHAT ARE THE MAIN FEATURES?



Remote **monitoring** of **vital signs** 



Videocall, chat and file sharing



Reports and indicators



Management of daily plans and activities



**Questionnaires** for health assessment and follow-up



Informed consent



Managing alerts, notifications, and reminders



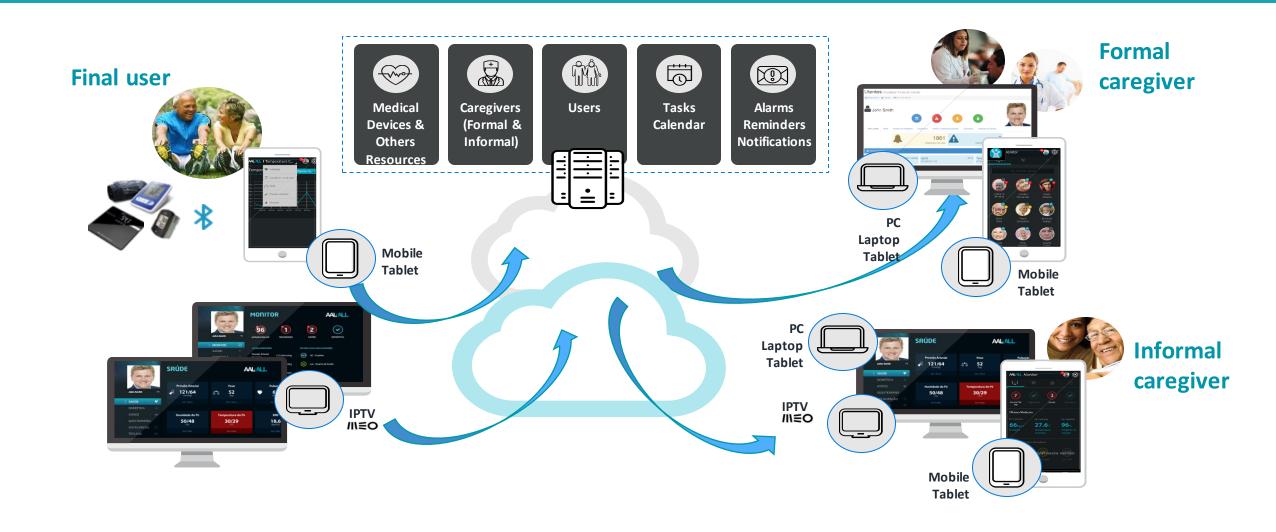
Content **tutorials** in video and PDF



Information security



#### **CLINICAL TELEMONITORING**





#### WHAT ARE THE MAIN BENEFITS?

## CONTINUOUS PROFESSIONAL MONITORING,

... at a distance and in real-time.

#### ANTICIPATION OF CHANGES IN THE HEALTH STATUS,

... enabling preventive action.

## PERMANENCE OF THE PACIENTS IN THEIR NATURAL ENVIRONMENT,

... for longer, enhancing their autonomy, mobility and confidence.

## MORE EFFICIENT RESOURCE MANAGEMENT,

... for the potential reduction of emergency episodes and the follow-up of a greater number of users.





#### **IoT - CHALLENGES FOR THE CONTACT CENTERS**

+ VOLUME	REALITIVIE	WITH CONTEXT	IMMEDIATE ACTION
generated by IoT-communication equipment.	which generates greater added value in the interaction.	which implies a greater need for specialization.	with higher levels of autonomy.





## ARTIFICIAL INTELLIGENCE

+

KNOWLEDGE MANAGEMENT



BETTER DIAGNOSIS





MANAGEMENT





**Access Methods** 

**Knowledge Sources** 



**Processes** 



Languages



Interaction Channels





## ARTIFICIAL INTELLIGENCE APPLIED TO CONTACT CENTERS

#### REMOTE ACCESS TO HOUSING



Person not authorized to leave home (Alzheimer)

Identification of the person and photo comparison with the list of authorised persons that have access

Remote door opening





## ARTIFICIAL INTELLIGENCE APPLIED TO CONTACT CENTERS

#### PHYSICAL THERAPY USING THE TV



Patient who has to perform physiotherapy treatments



Videocall communication between patient and physiotherapist



Increased comfort of the patient





# VIDEOATTENTION AT THE SPANISH RED CROSS

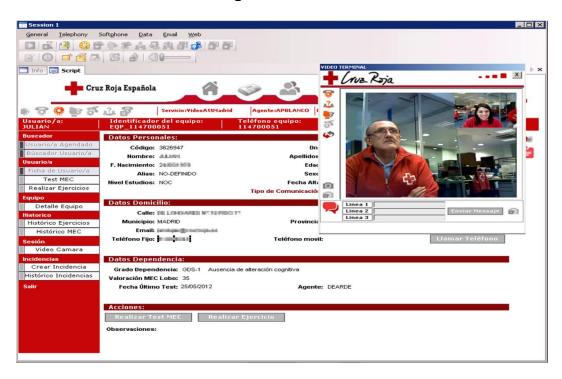
## WEB RTC APPLIED TO HEALTH

#### **CHALLENGE**

Maintaining permanent contact with the older population and optimize the time of nurses and volunteers.

#### **SOLUTION**

Voice & Video integrated with the Contact Center







## THE SOCIAL NETWORK FOR THE ELDERLY POPULATION

#### **CHALLENGE**

Improve the quality of life of the elderly population living alone and away from the family and hospitals linking them virtually to volunteers and relatives.

#### **SOLUTION**

Social network to connect these users with volunteers,
Nurses and relatives.









#### CONCLUSION

#### **ABOUT THE ALTITUDE PARTNERSHIP**

- 2 years of partnership and working together
- 26 Clients deployed
- + 4.5 million of processed contacts

•

#### ABOUT THE PRODUCT / SERVICE

- Today we are witnessing first-hand disclosure of a new product/service for the health market
- It's focus is remote support for populations with healthcare needs through IoT
- We have put together the best of 2 worlds: a vertical health and a customer management platform
- Will be operated first hand by a contact center, without prejudice to be able to support remote
  users

#### ABOUT THE IMPACTS OF IOT IN THE CONTACT CENTERS

- More volume
- In real-time
- With more added value
- With context-need for specialization
- With immediate action and more autonomy





## THANK YOU

www.altitude.com | rogerio.neiva@altitude.com | @AltitudeSoft