



**Third ITU/WHO Workshop on "Artificial Intelligence for Health"  
Lausanne, Switzerland, 22 January 2019**

# Solutions 4 Health - Overview



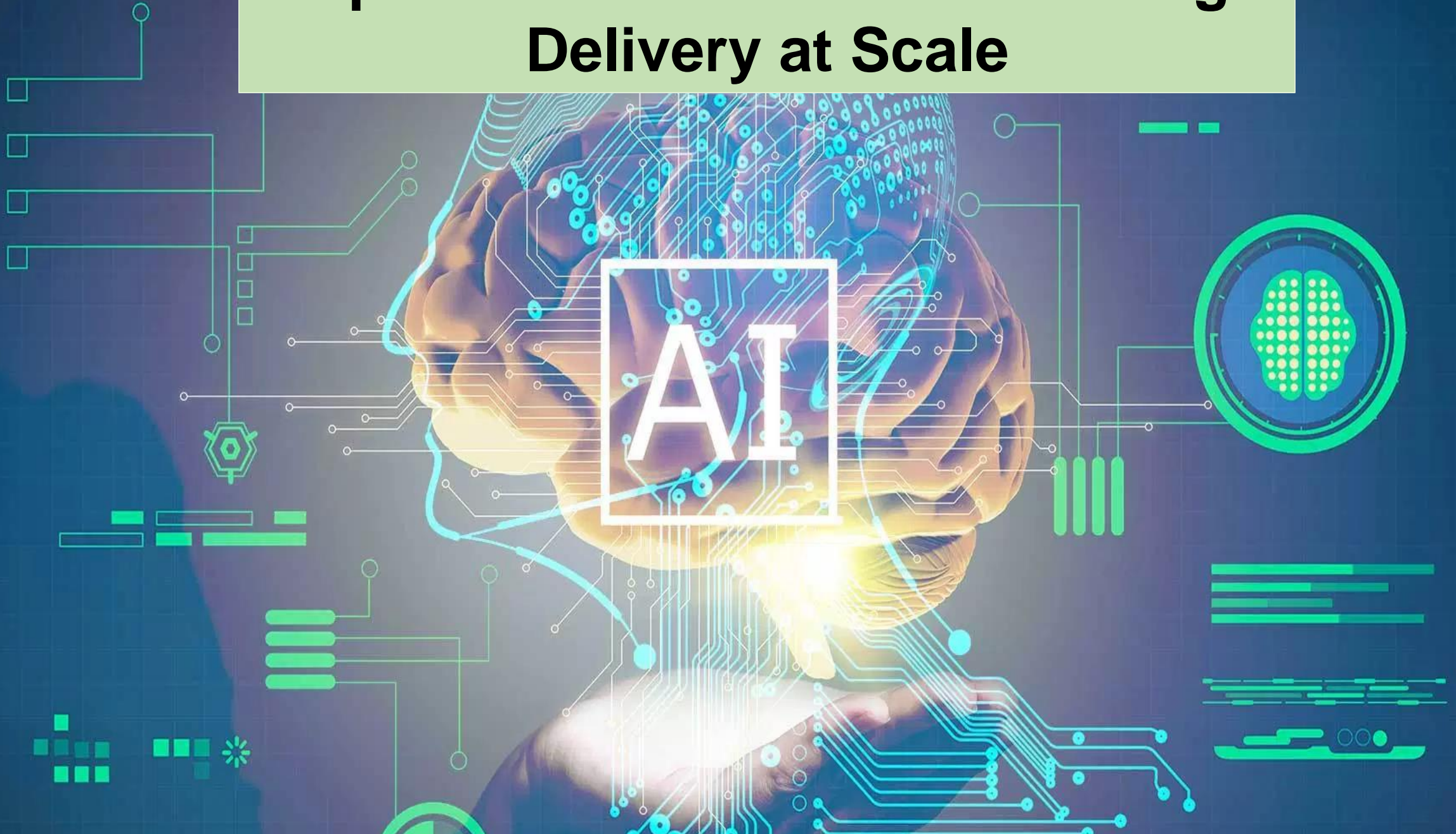
# Objectives

- Approximately 1.1 billion people across the world smoke tobacco.
- Someone dies from a smoking-related illness **every six** seconds
- Leading cause of **preventable** death.
- Most smokers **want to stop** smoking but don't have access to the tools they need to quit
- Deliver a solution **at scale** available on **mobile** phones (iOS, Android) and voice activated devices – Alexa & Google Home
- Build this on **strong behavior change** theory and existing evidence base (NICE/NCSCCT)
- Cost effective solution, available **24/7**





# Population Wide Behavior Change Delivery at Scale



# Building upon 10 years of delivery experience



DATA



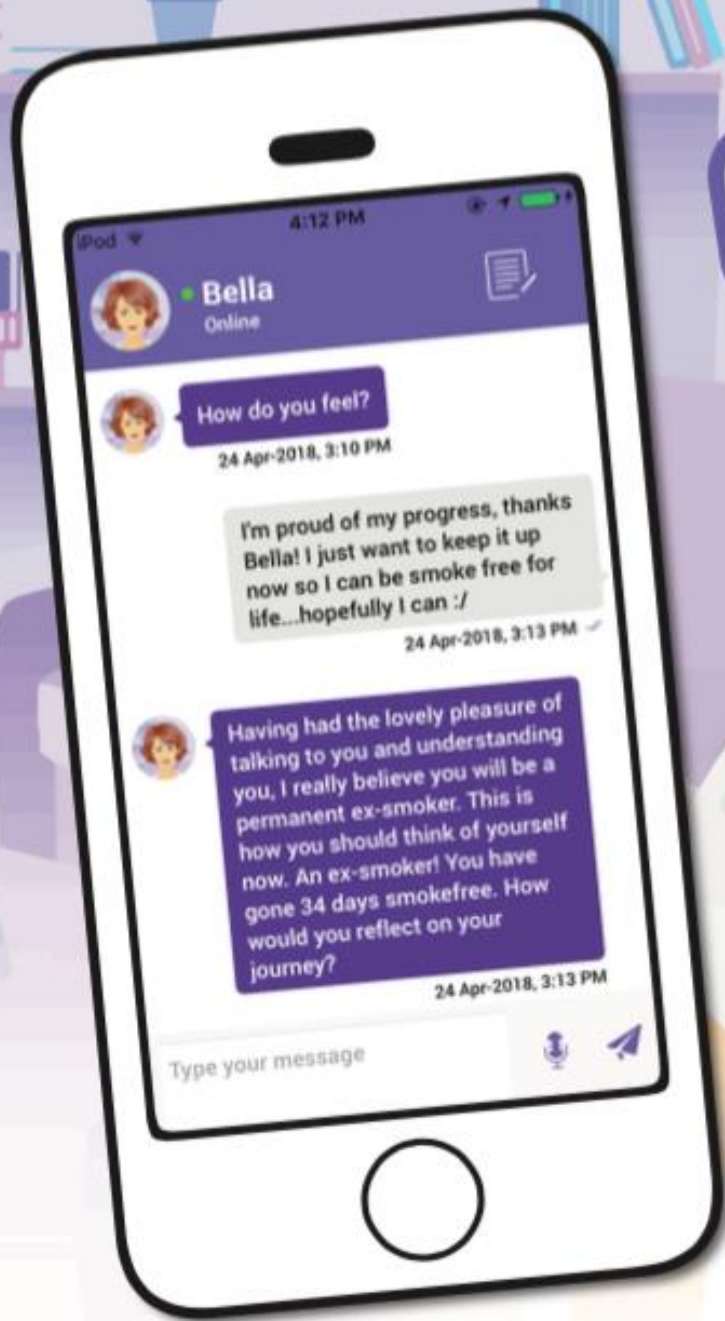
KNOWLEDGE



ACTION



*National Institute for  
Health and Clinical Excellence*



# Quit with Bella



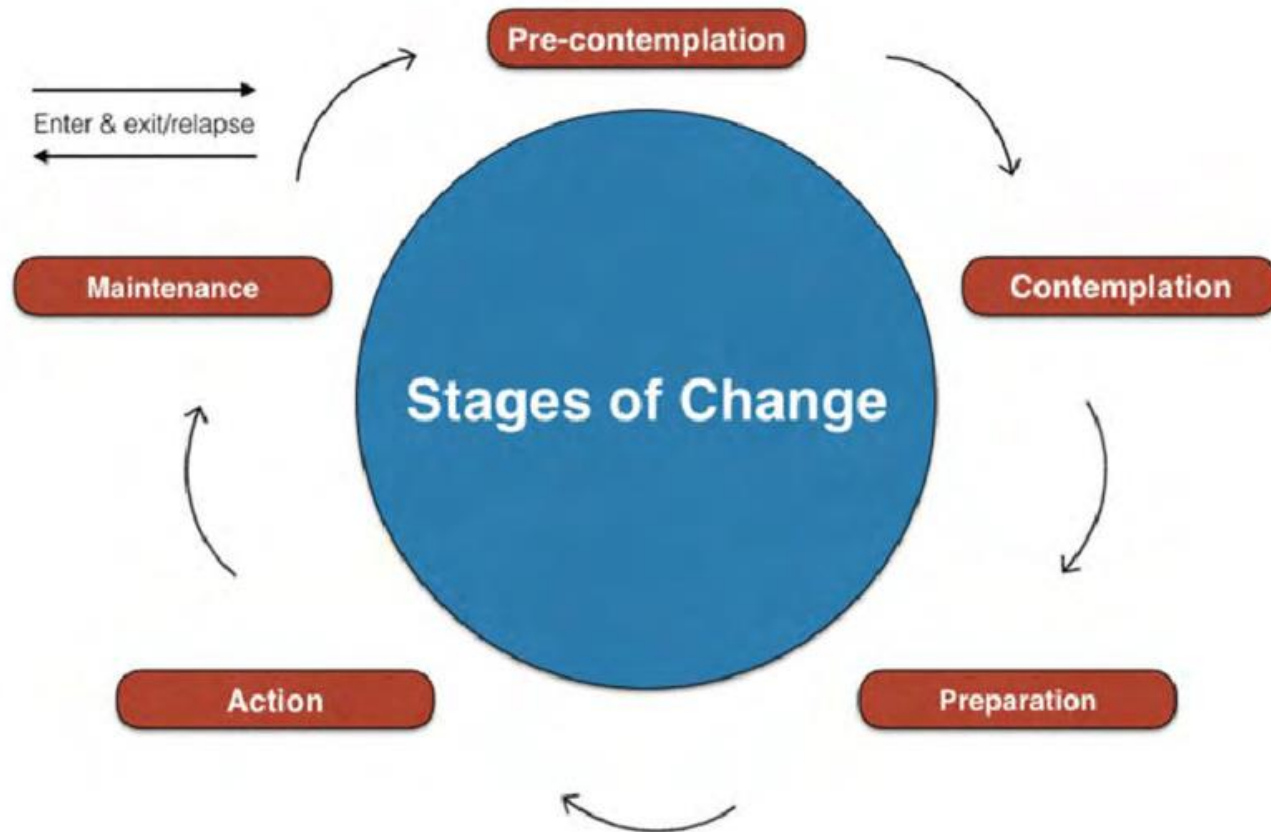




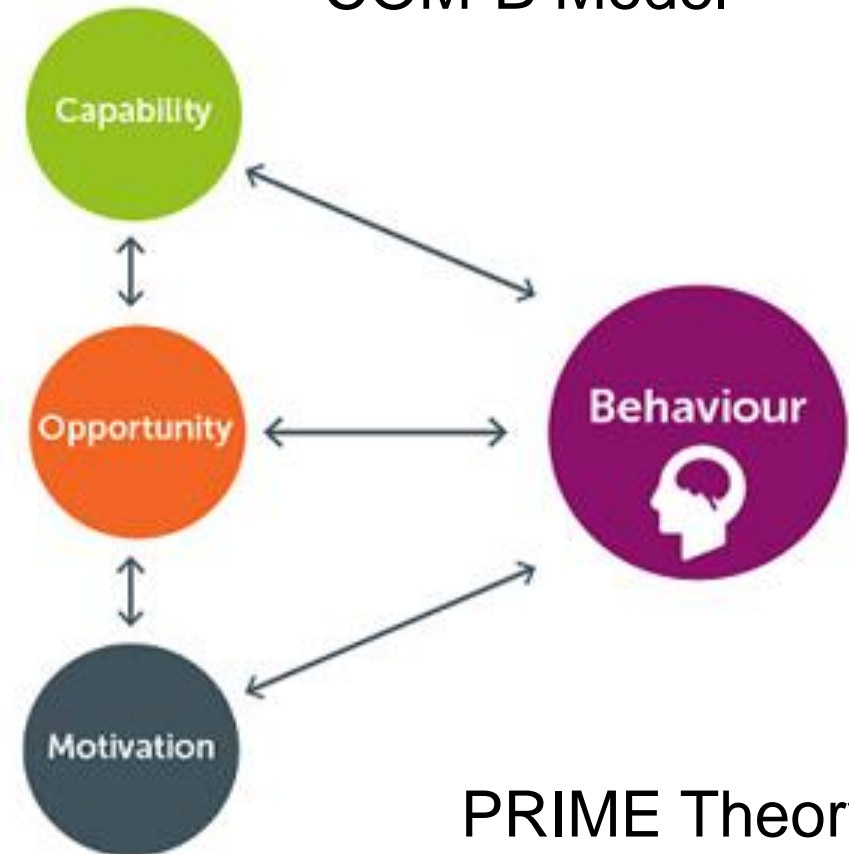
# Quit with Bella

# Strong Evidence Base

Prochaska and Diclemente



COM-B Model



PRIME Theory



Quit with  
Bella

# What we know from the evidence:

- Goal setting
- Self-monitoring
- Action planning
- Normative feedback
- Cognitive bias re-training
  - Identity change

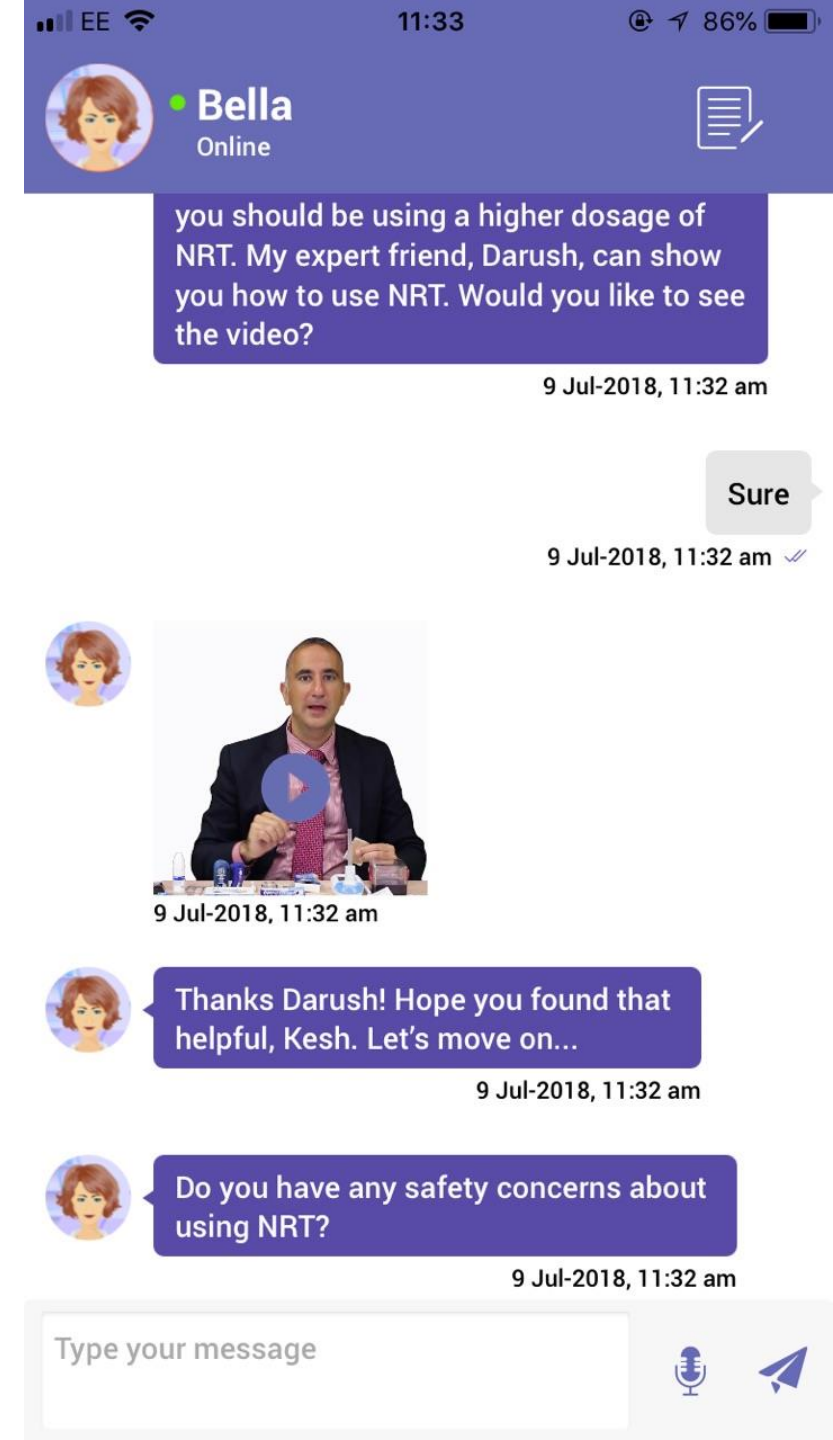
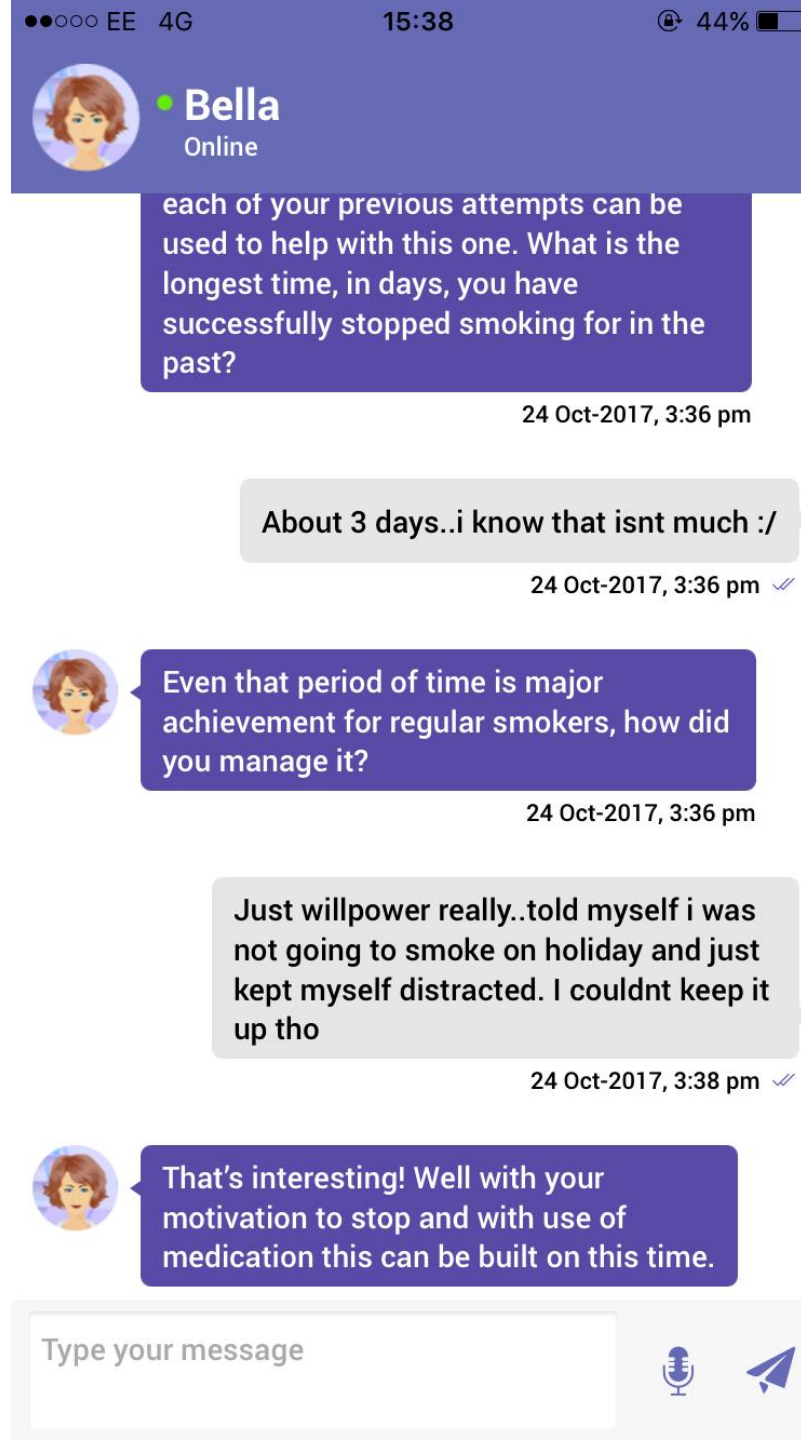




Natural Language Processing enables Bella to create **real rapport** with user, thus enabling a personalised conversation.

Utilized our **experts within the app** in video form, providing stronger and more holistic support.

Recommends options for **NRT**



# Bella Community

Strong evidence base showing **peer** support increases the likelihood of successful behavior change.



Express yourself to the Community Post



Hey guys I'm Laura & I am now 2 weeks smoke free, I managed to survive through 2 party's with lots of free flowing alcohol & 85% of my friends smoke 😊

1 smile · 2 comments

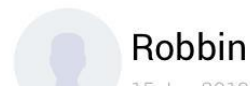
😊 Smile | 💬 Comment | 🚩 Flag



Were do I begin

1 comment

😊 Smile | 💬 Comment | 🚩 Flag



tree, I managed to survive through 2 party's with lots of free flowing alcohol & 85% of my friends smoke 😊

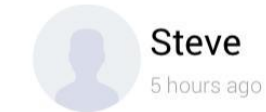
1 smile · 2 comments

😊 Smile | 💬 Comment | 🚩 Flag

Smile



Comments



That's amazing we'll done proud of yoy

0 smile · 0 comment

↩ Reply | 😊 Smile | 🚩 Flag



karen

5 hours ago

Wow that's amazing - this is my first week of being without a cig - I am treating myself to a cheeky Nando's tonight 😊

0 smile · 0 comment

↩ Reply | 😊 Smile | 🚩 Flag

# Case Study

- Quit with Bella – Being rolled out across hospitals in Wales
- Doctors and Nurses to **prescribe** “Quit with Bella” to all smokers.
- Future plan is to provide this in Wales across population of **3 million**

*“Every smoker wishing to quit is a unique individual. New technologies and AI offer exciting opportunities to individually tailor support for each smoker in their quit attempt and afterwards. With proper evaluation, these technologies can be used to enhance traditional stop-smoking services between sessions and also engage the majority of smokers who are unwilling or unable to attend specialist support.”*

***Professor Keir Lewis - Professor of Respiratory Medicine***



GIG  
CYMRU  
NHS  
WALES

Bwrdd Iechyd Prifysgol  
Hywel Dda  
University Health Board



**Trusted By**



**Liverpool  
City Council**



**Microsoft**



**Bracknell  
Forest  
Council**



**Reading**  
Borough Council  
Working better with you



ROYAL BOROUGH OF  
**WINDSOR &  
MAIDENHEAD**  
WWW.RBWM.GOV.UK



**GIG  
CYMRU  
NHS  
WALES**

Bwrdd Iechyd Prifysgol  
Hywel Dda  
University Health Board

# Past few months....





