

babylon

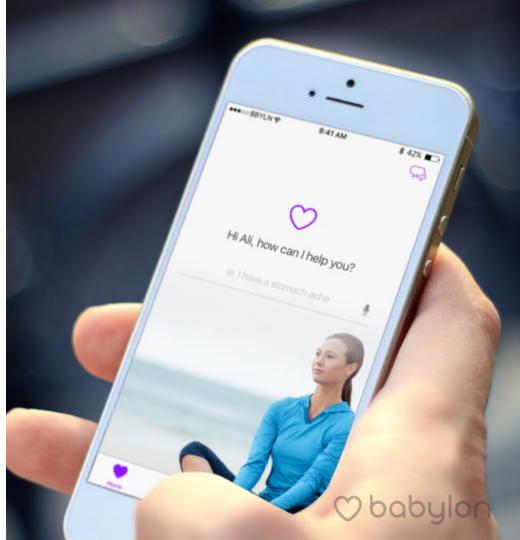
Company overview

January 2018

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babylon was founded to put an **affordable** and **accessible** health service into the hands of every person on earth.



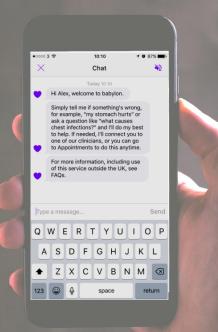
The problem: Affordability and accessibility of healthcare provision

Accessibility:

In a world with over 5bn mobile phones, as long as we put most of the healthcare most people need on the devices most of them already have, we can make day-to-day healthcare highly accessible.

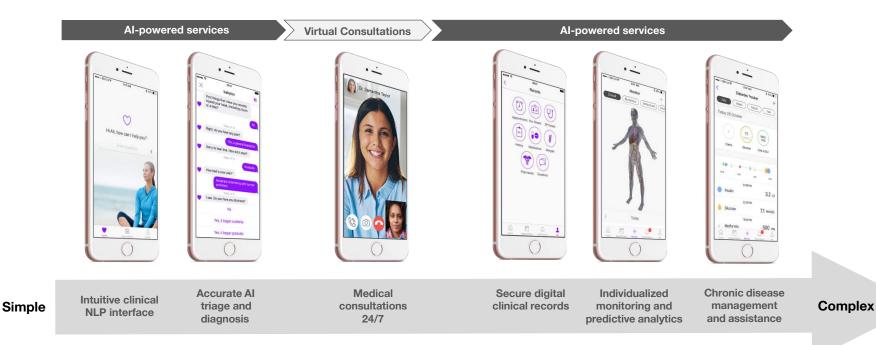
Affordability:

Most costs in healthcare sit in two buckets: people and timing. Two thirds of costs in healthcare is in salaries, whilst need for expensive treatments can often be avoided through monitoring and early intervention.



Obabylon

The solution: babylon is uniquely positioned through it's AI and virtual consultation services to meet the challenges of accessibility and affordability



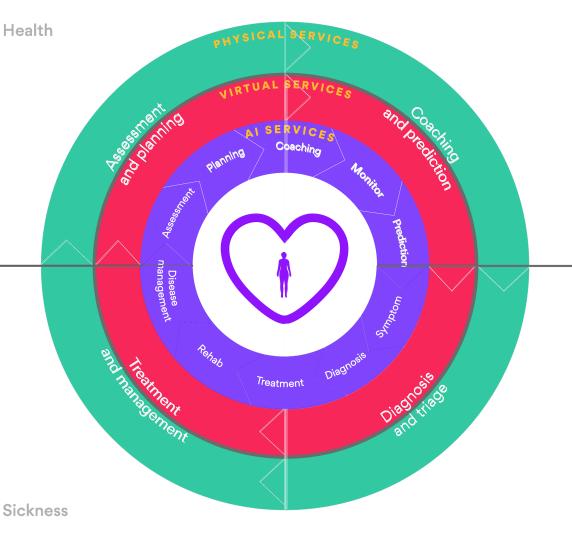
Our platform will empower users to manage and predict their own health outcomes

babylon has built a comprehensive AI platform and virtual services offering; these span both the health and sick care cycle.

For the sick, we are able to remotely and cost effectively triage and diagnose diseases.

For the healthy, we are able to assess and predict to keep them in the peak of health, primarily through AI and, where necessary, through virtual clinical services.

As our suite becomes more comprehensive, the AI services will increasingly reduce the burden on virtual and physical clinical services.



To make our service universally scalable and affordable, we built a comprehensive medical AI agent that mimics a doctor's brain

Triage and diagnostics

Health issues are triaged and diagnosed from personal symptoms and risk factors by compaing them with millions of data points stored in the knowledge base using a Probabilistic Graphical Model. Learning

Dur machine is continuously learning and refinin its own ability to diagnose and predict as the knowledge base grows.

Predictive Analytics

Individual profiles (behaviours, genetics, reoccurring symptoms, test results, etc.) are analysed in comparison with millions of others to predict future health risks. Our machine can then coach and nudge the individual's behaviour to prevent future illness.

Natural Language Processing

By turning text & speech into structured data, our machine can transcribe consultations, summarise clinical records and chat with users in a natural, human way.

Knowledge base

A rapidly growing pool of structured data, surpassing any individual doctor, which feeds the rest of our Al machine.

Through our AI and virtual consultation services, users have a doctor in the palm of their hands at all times

AI services

Our Al platform, utilising advances in data science, natural language processing, probabilistic reasoning and deep learning, allows everyone, everywhere to have a doctor in the palm of their hands:

AI Triage and Diagnosis

Our diagnostic engine triages patients to appropriate services or providing a full diagnosis and advice.

Full Health Assessment

Our AI platform assesses users' health, predicts future health risk and advises on how to improve health.

• **Digital Twin and Personal Clinical Record** Our platform creates a Digital Twin of the user; a 3D anatomical model that simulates future health. In collaboration with partners, we deliver **Virtual Services** that enable users to speak to a GP, access their medical records and order prescriptions to your preferred pharmacy.



24/7





Virtual Consultation services

Prescriptions delivered to your pharmacy

We are delivering thousands of AI consultations a day, and one virtual or physical consultation with a doctor every minute

More patient interactions than anyone else globally

Number of interactions a year per 1000 population covered



People who use babylon love it

94% of users give babylon a 4 or 5 star rating

*****	40,387
****	3,806
*****	1,172
*****	458
****	1,035

Recognised in the industry and by the press



Best Al Product in Health 2017 

#MobileGameChangers Award 2018



The Europas 2017, Hottest Health Startup

BUSINESS

The 100 coolest people in

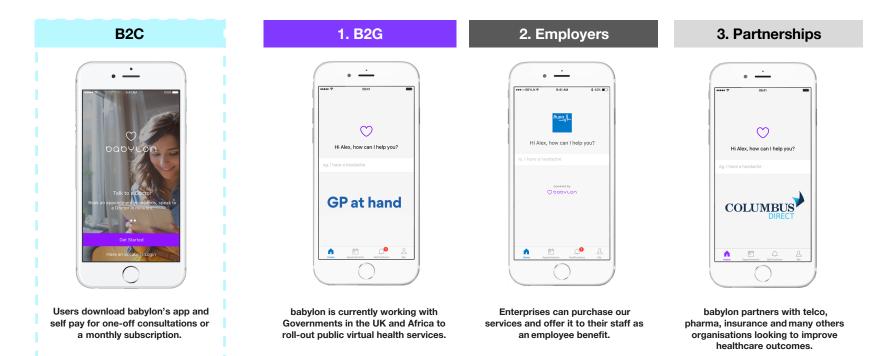
UK tech 2017, Ali Parsa



Top 10 European Startups 2017, 1st Place



We launched in the UK, experimenting with a wide set of distribution channels alongside B2C, with our B2G, Employers and Partnerships value propositions



We are uniquely positioned to add significant value to our clients and partners

Reduce costs Improved service Reduce absenteeism People perk Significant reduction in cost of diagnosis and consultation Efficient triaging means we can reduce of P waiting times to just 2hrs A competitive employee benefit, babylon helps to attract and retain talent Mesource utilisation Clinical excellence Managing long-term conditions, improving overall health and wellness Provisioning for the work-life balance; caring for the personal and professional Mere clinical staffing resources are scarce, we ensure effective allocation Patient engagement Managing long-term conditions, improving overall health and wellness Provisioning for the work-life balance; caring for the personal and professional Offering doctors the opportunity to work remotely and part-time Enabling patients to take ownership of monitoring and managing their care Covering the whole family, providing patients Care for employees in the UK and abroad Unstant Bisinght Care for employees in the UK and abroad		B2G		Employer	
Significant reduction in cost of diagnosis and consultationElificant inaging means we canneddee GP waiting times to just 2hrsIncrease production in working hours lost to GP visitsbabylon helps to attract and retain talentResource utilisation Where clinical staffing resources are scarce, we ensure effective allocationClinical excellence Superior accuracy and speed of diagnosisIncrease productivity Managing long-term conditions, improving overall health and wellnessCultural message Provisioning for the work-life balance; caring for the personal and professionalFlexible workforce Offering doctors the opportunity to work remotely and part-timePatient engagement Enabling patients to take ownership of monitoring and managing their carePeace of Mind Covering the whole family, providing peace of mind for parentsGlobal populations abroad	ШШ	Reduce costs	Improved service	Reduce absenteeism	
Where clinical staffing resources are scarce, we ensure effective allocationSuperior accuracy and speed of diagnosisManaging long-term conditions, improving overall health and wellnessProvisioning for the work-life balance; caring for the personal and professionalFlexible workforce Offering doctors the opportunity to work remotely and part-timePatient engagement Enabling patients to take ownership of monitoring and managing their carePeace of Mind Covering the whole family, providing peace of mind for parentsGlobal populations Care for employees in the UK and abroad		0			
scarce, we ensure effective allocationdiagnosisimproving overall health and wellnesscaring for the personal and professionalFlexible workforce Offering doctors the opportunity to work remotely and part-timePatient engagement Enabling patients to take ownership of monitoring and managing their carePeace of Mind Covering the whole family, providing peace of mind for parentsGlobal populations Care for employees in the UK and abroad		Resource utilisation	Clinical excellence	Increase productivity	Cultural message
Offering doctors the opportunity to work remotely and part-time Enabling patients to take ownership of monitoring and managing their care Covering the whole family, providing peace of mind for parents abroad					
remotely and part-time monitoring and managing their care peace of mind for parents abroad		Flexible workforce	Patient engagement	Peace of Mind	Global populations
Insight					
nogn			Insi	ight	

Aggregated data sets provide valuable insight into population health and trends

End value to the consumer



Our partnerships span across industries, from insurance to pharma and tech



Putting healthcare in the hands of anyone, anywhere

By reducing overall healthcare costs, we provide users with an affordable service

Fast, accurate medical advice 24/7

Making it easier to manage your own health and predict any risks

1. B2G (UK)

babylon started in the UK and as such it is where our model of delivery is most developed

babylon currently serves patients in the UK's National Health Service (NHS) through four different methods:

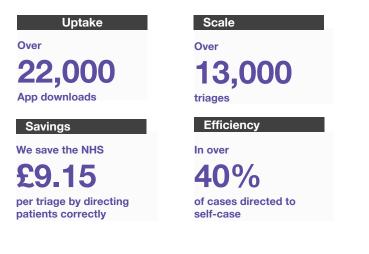
Chatbot triage	Chatbot triage + babylon platform	Chatbot triage + babylon doctors	Full suite of services: GP at Hand
The NHS has commissioned us to provide our AI chatbot to a population of almost 2 million patients as a substitute for their telephone triage service, NHS 111.	Building on the success of our NHS 111 triage, we will shortly allow NHS GPs to use our platform to deliver video consultations to their own patients.	Patients are able to use the babylon app free of charge through their existing NHS GP. Babylon provides the app and additional clinician time through video appointments.	In addition to chatbot and triage, babylon provide the full spectrum of in-person and virtual services, with patient's selecting babylon as their NHS GP. This includes access to in-person appointments at several sites across London, with plans to roll-out nationally in the coming months.
~2 million patients	Rolling out soon	Rolling out soon	Confidential

1. B2G (UK)

Our NHS 111 triaging app now serves almost two million people, whilst GP at Hand slashes waiting times from two weeks to two hours

NHS 111: babylon has implemented AI triage technology across North London. Our app offers users a symptom checker and intelligent triage, with information approved by the UK's NHS.

Our app determines optimal actions for patients, ranging from self-care through to a 999 emergency service.



GP at Hand:

- Check symptoms
- Book a GP appointment in seconds through the app
- Have a video consultation with an NHS GP typically in **under two hours of booking**, anytime, anywhere
- Have an in-person appointment if needed on the same or next day, at convenient city centre locations
- Have prescriptions delivered to a pharmacy of their choice

4.8 / 5.0

Average rating for video consultation

95% 4-5* user ratings



1. B2G (Intl.)

To prove we can serve both the richest and the poorest countries, we are building a national digital health service for the entire population of Rwanda

babylon partnered with the Government of Rwanda to give Rwandans one of the most progressive solutions in healthcare the world has ever seen through the 'babyl' app.

• Services:

The babyl app provides users with; Health information, prescriptions, video consultations, telephone consultations.

• The model:

Users can access our service via an app, which can be downloaded via the Google Play store (video and voice) or with a voice USSD service.

Technology:

Due to the predominance of feature phones versus smartphones and the mobile infrastructure in Rwanda, the app is USSD based.

Team:

Today we have over 25 clinicians supported by a team of 20+ back office and technical staff.

• Expansion:

We will expand our operations in Rwanda to a further 500k patients in 2018 and provide 350k consultations, supported by our funding from the Gates Foundation. We are partnering with the government to roll-out a subsidised model to all Rwandans, funding a further 100k consultations in 2018

BILL& MELINDA GATES foundation





We are the sole provider of digital health in Rwanda







Adults in Rwanda have registered with babylon.

Growth in Rwandan users in the last 12 months.

Patients a day.

2. Employers

We dominate the corporate benefits market in the UK, with over 60% market share

We have partnered with the largest UK insurers and the largest global brokers — including Aon and Mercer — to provide babylon as an employee benefit to corporates.



3. Partnerships

We partner with technology, pharma, insurance and retail companies to license our technology, roll out services to their customers and scale globally

Retail	Insurers
We are in ongoing discussions with the major healthcare	babylon is engaged, within the UK, Europe, Asia-Pacific,
retail chains in the UK, exploring integrating of our	North America and Africa with some of the world's
chatbot technology within their platforms.	largest insurers.
Pharmaceutical companies In partnership with global pharmaceutical companies and NHS commissioners, babylon is launching services addressing health challenges and chronic diseases including smoking, obesity, diabetes, asthma, psoriasis and parkinsons.	Communications, media and technology We are in advanced stages of business plan development to launch a nationwide service with a leading telecommunications company in a new market in January 2018.

A proven track record of building large companies, with 300+ scientists, clinicians, engineers and business specialists



Ali Parsa, PhD Founder & CEO Serial Entrepreneur Times 100 Watchlist



hD Gary Mudie EO COO eur ASOS, Circle Health



Charlie Steele CFO CMC Markets, Deutsche Bank



Mark Tsimelzon, PhD VP Engineering Yahoo, Akami, Stanford



Paul Bate Head of NHS Prime Minister's Policy Advisor (Health), McKinsey, CQC



Mobasher Butt Medical Director BMJ, WHO, NHS



Amanda Cupples Chief Commercial Officer Deluxe Entertainment, EMI, McKinsey



Tracey McNeill Chief International Mobilisation Officer Marie Stopes, Circle Health, Bupa



Umang Patel Clinical Director Aviva, NHS



Mairi Johnson Head of Partnerships Goldman Sachs, Circle Health, Healthbox



Olly Finding International Director Hackett, IMM, Jack Wills



Jean-Philippe Doumeng Commercial Director *TicTrac, Nokia, ING*



Claire Morris International Partnerships Director Marie Stopes Int.

♡babylon

Thank you



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