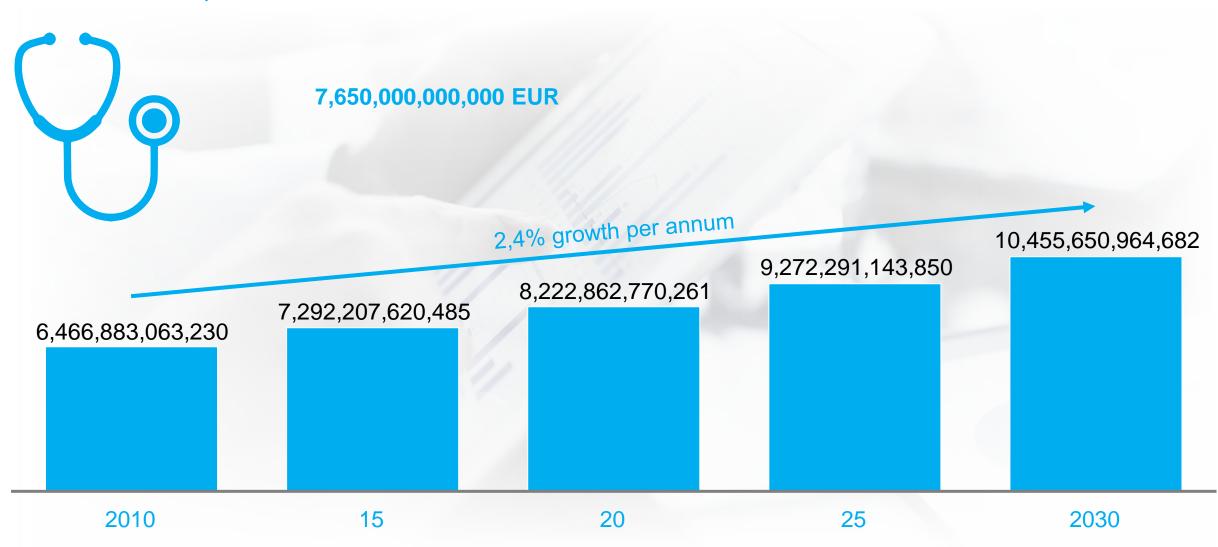


Healthcare spend is already huge and growing rapidly

Global health expenditure in 2017 is ~



SOURCE: WHO-Data

... And faces considerable challenges

24%

of US population will be aged 65+ by 2060

1 in 3

physicians in Europe aged 55+ 30-40%

increase in number of people with chronic disease by 2025

€29bn

spent on obesity in Germany per year

347m

People globally with diabetes

210,000

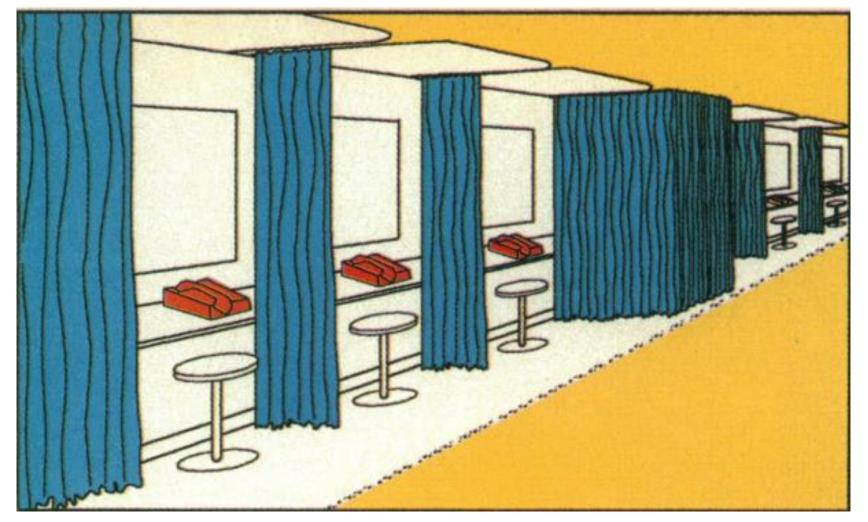
deaths per year were associated with preventable harm in hospitals in the US

50m

people suffer complications after surgery each year globally

We struggle to adopt new technologies, new approaches

"Futuristic, but possible: The Mediphone¹"





The computer asked a few more questions and carried out a few more analyses on his breath to exclude other possible causes of abdominal pain. It then compared the patters of symptoms and signs obtained from David with those in the National Databank and noted that the most probable diagnosis was cholecystitis. It looked through his family history

And lag behind other industries in productivity gains

15 year CAGR for labour productivity (1999-2014) 2016 1990 ~\$5,500 <\$100 Computers **US** manufacturing 3.9% 1992 Cell ~\$1,500 \$549² phones² **US** services 1.1% 1979 ~\$650 ~\$300 Airline tickets³ 0.5% Health services 2008

Express

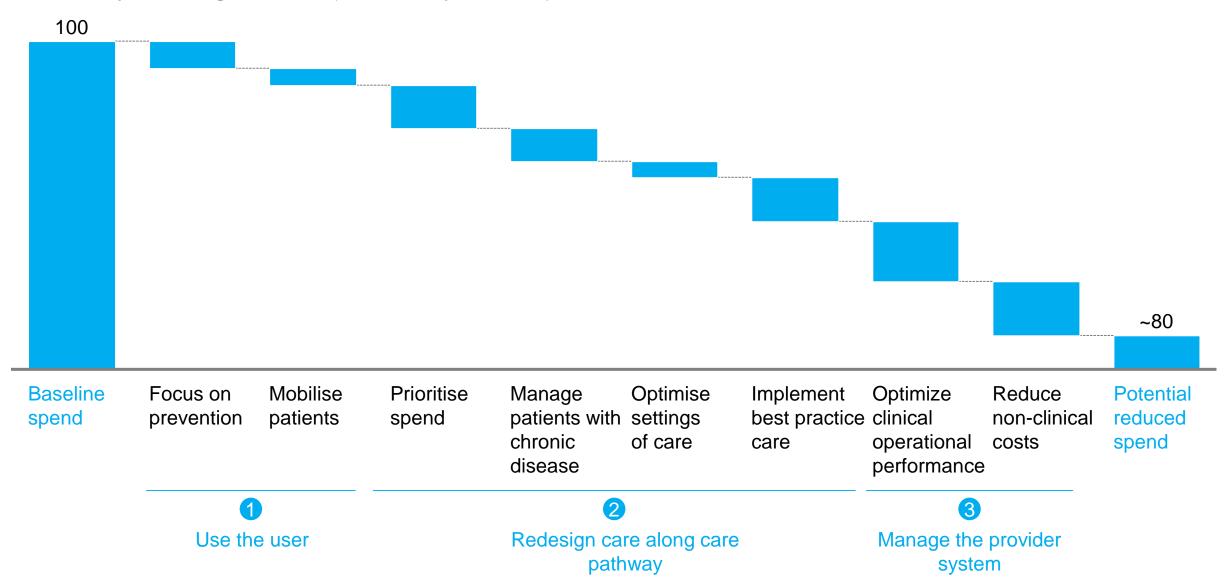
Scripts⁴

\$100

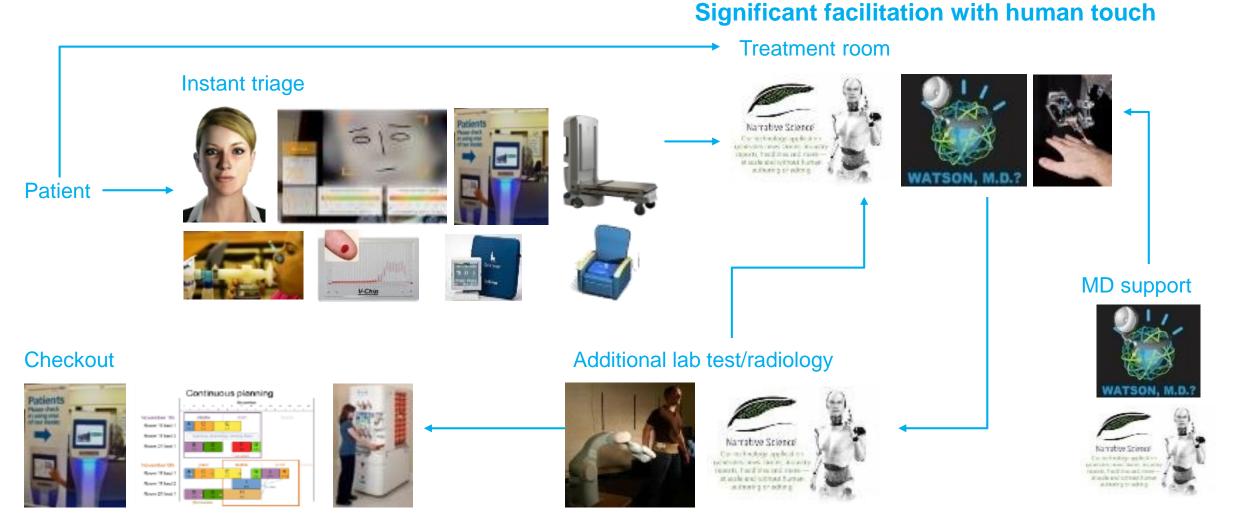
\$236

The good news is that we know what to do to reduce costs and save lives

Potential 5 year savings vs. trend (% of total system cost)



Potential for far more self service careExample of an automated ED



3 60 percent of all occupations have at least 30 percent technically automatable activities

SOURCE: McKinsey Global Institute McKinsey & Company 7

An enhanced maternity experience - requiring at least 50% less midwife time per pregnancy

Using technology to provide faster more convenient access

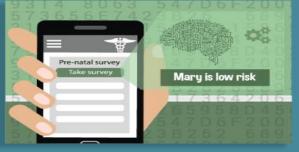




Digital technology enables her to: Book all her appointments online, including with the GP, the midwife, scans, blood tests; she has full visibility of when appointments are available, where and chooses a time and location that matches her needs



Can check her own health records Receive direct communication from the midwife should her blood pressure increase



Self-manage her pregnancy: She receives a link to complete her pre-natal survey; she completes this online; an algorithm determines her risk profile, which will flags her for a midwife appointment sooner if she is high risk



Because she is low risk she can provide all urine tests and blood pressure test at home or a local pharmacy, with results automatically uploaded to her electronic

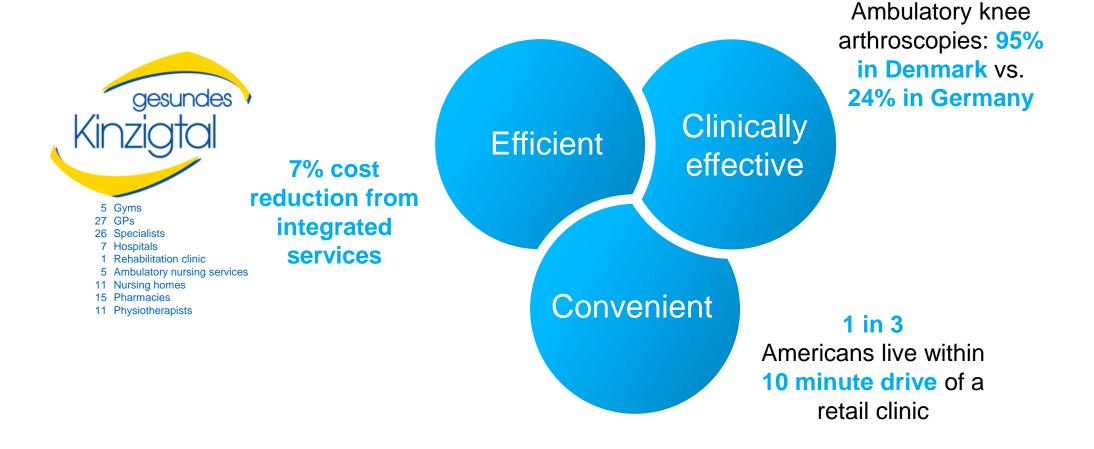


Receive personalized weekly updates on her pregnancy, including how her baby is developing, changes she can expect in her body, dietary recommendations. Receive decision support around, for example, taking the down syndrome test



Receive reminders around upcoming appointments

Shifting care out of hospitals

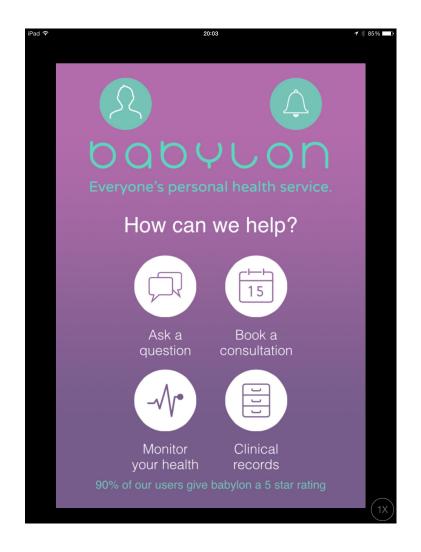


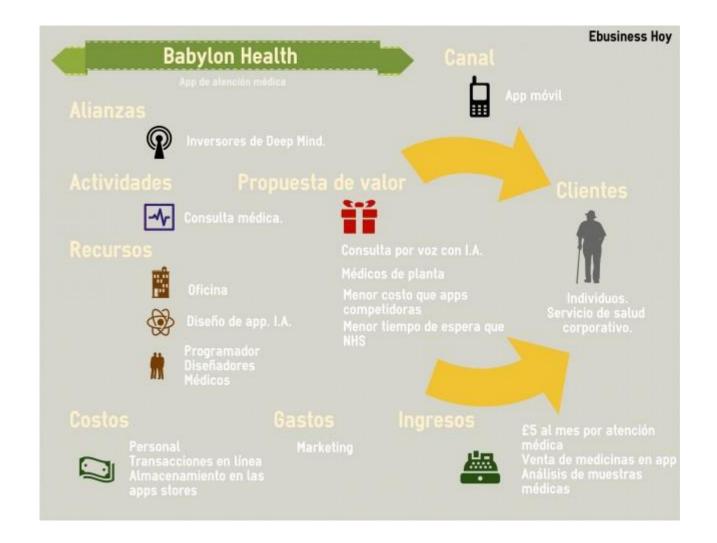
Digital disruption is driving provider productivity



- Staff access patient EHR on mobile devices
- Intelligent design reduced staff walking time by 18%
- Bedside telephones double as bar code scanners
- Robots deliver 75% of internal supplies
- All 25 theatres are digitally enabled and respond to voice commands
- Medication is dispensed by machines

And providing higher quality, more accessible and lower cost care





But there are massive barriers to change

Politicians



"And the answer about who killed healthcare is: the status quo" (Regina E. Herzlinger, Professor at Harvard Business School)

Patients



"80% of health apps are abandoned within two weeks" (Marco Della Torre, VP of Product Science at Basis Science, Inc.)

Regulatory hurdles



"The protocols these institutions [healthcare authorities] are using, they're now 50 years old"
(Peter W. Huber, Senior Fellow at the Manhattan Institute for Policy Research)

Professionals



"What we cope with as an insurer is the notion of people getting paid more for doing more 'stuff' whether or not that actually contributes to better clinical outcomes"

(Lonny Reisman, Senior Vice President and CMO at Aetna)

SOURCE: Press; Healthplanadvisor; McKinsey McKinsey McKinsey 12

So what could change?

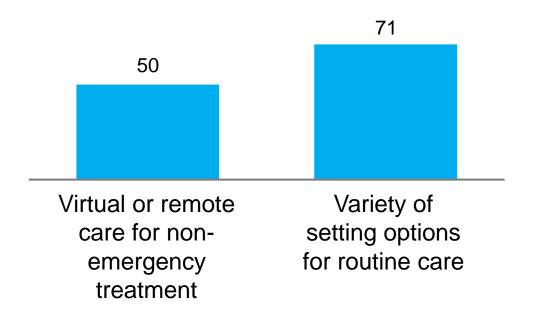




Customer choice is helping to overcome hurdles and gather speed



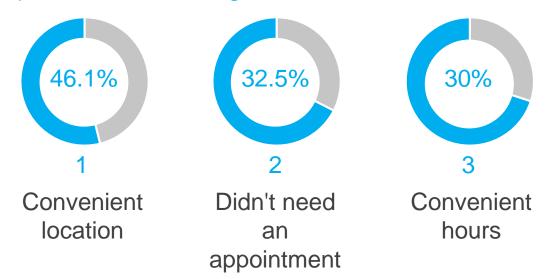
Consumers want choice in settings of care ...





... and prioritize convenience and access

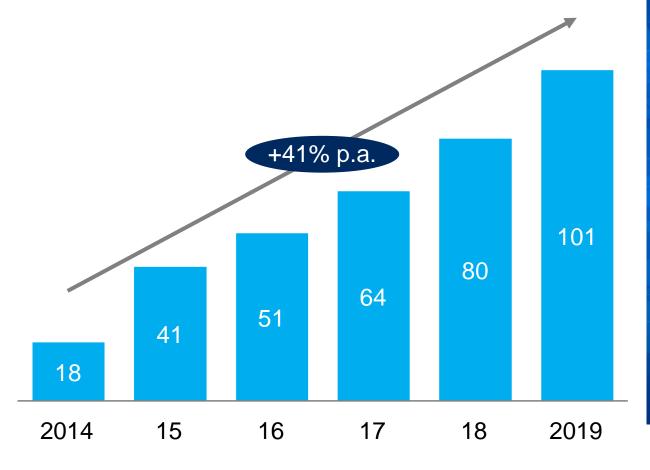
Top 3 reasons for using a health clinic in a retail store



Uptake of technology and big data offers significant opportunities to target effective interventions

Insurees have become their own health managers ...

Global sales of activity trackers, in units million



... increasing data availability

The global healthcare analytics market is expected to grow between 2016 and 2021 with a CAGR of 27.1% from USD 7.39 bn to USD 24.55 bn

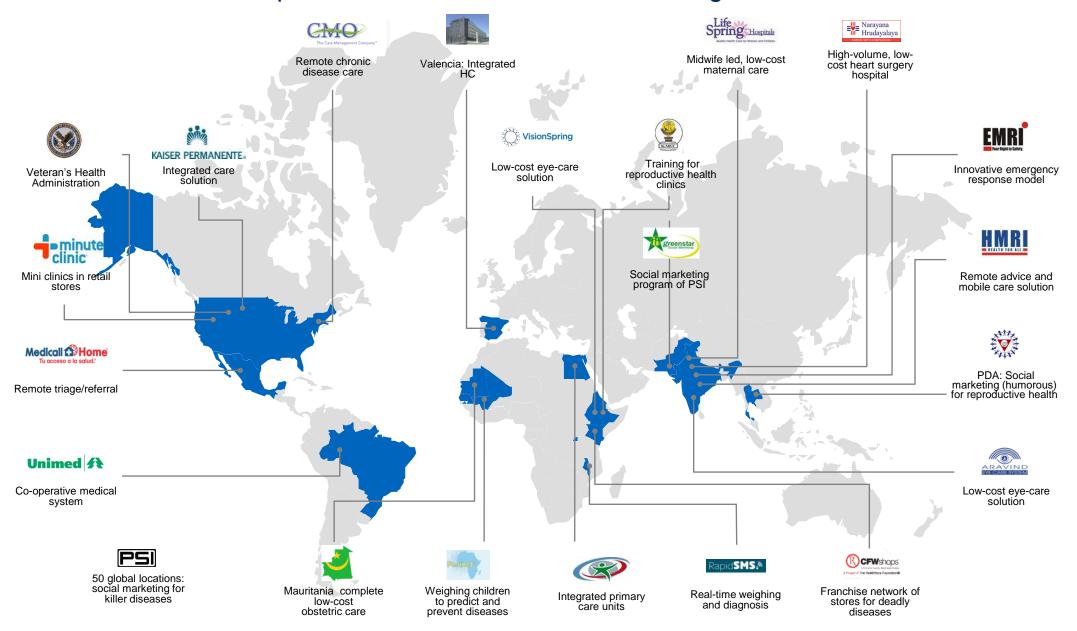
Healthcare data is growing at 48% per year globally, faster than the rest of the whole Digital Universe

Every 2 days, as much health data is created as was from the dawn of time to 2003

Loading all healthcare data onto the memory of tablets, by 2020 the stack would reach over 1/3 of the way to the moon

SOURCE: Nielsen, Statista` McKinsey & Company 15

The scale of innovation in the provision of healthcare is accelerating

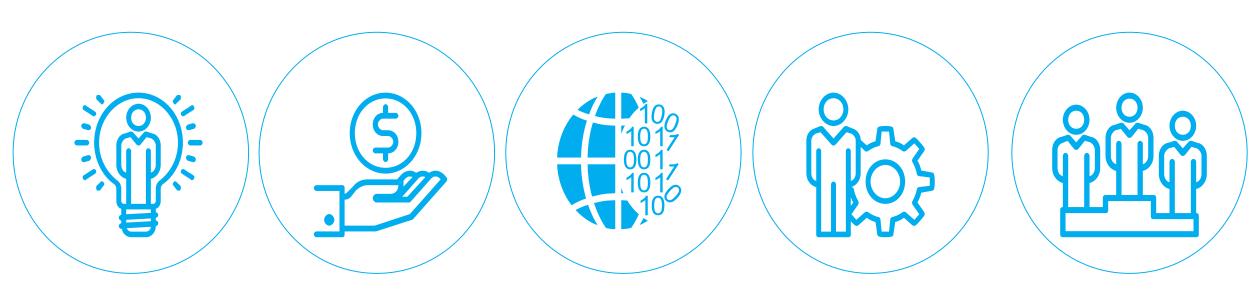


Providers are becoming payors and payors are becoming providers





But all players will need to take far more radical action



Build and **adopt** innovative customer propositions

Drive disruptive and sustainable change in provider models Be at the leading edge of big data and analytics

Seek to bring all parties together Have political will to be the frontrunners for change

Thank