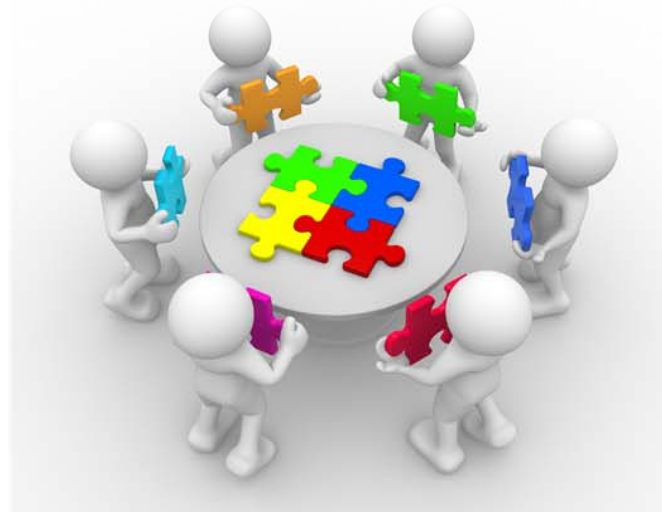


The Challenges of Big Data: Future Risks, Governance and Trust

"Big data is such a new area that nobody has developed governance procedures and policies, there are more questions than answers."

Boris Evelson, Forrester Research Inc. August 2012



Prof Bill Buchanan, Edinburgh Napier University
<http://asecuritysite.com>

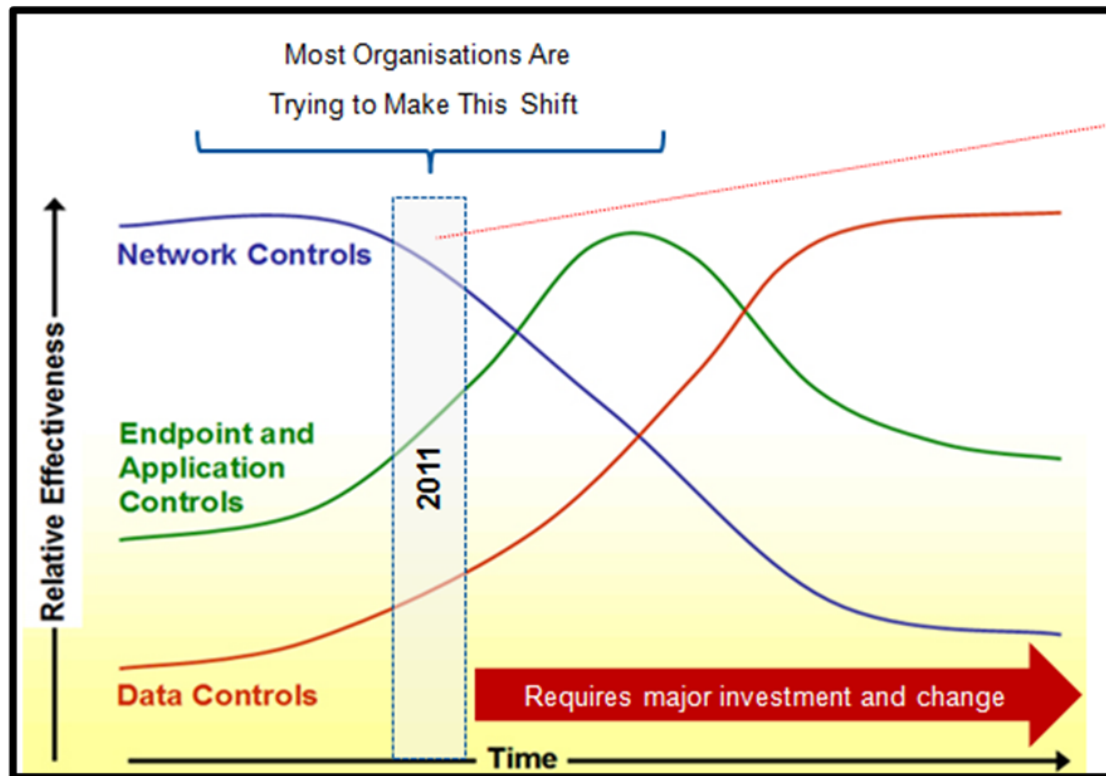
The Challenges of Big Data: Future Risks, Governance and Trust

Changing World ...



Prof Bill Buchanan, Edinburgh Napier University

The Challenges of Big Data: Future Risks, Governance and Trust



Prof Bill Buchanan, Edinburgh Napier University
<http://asecuritysite.com>



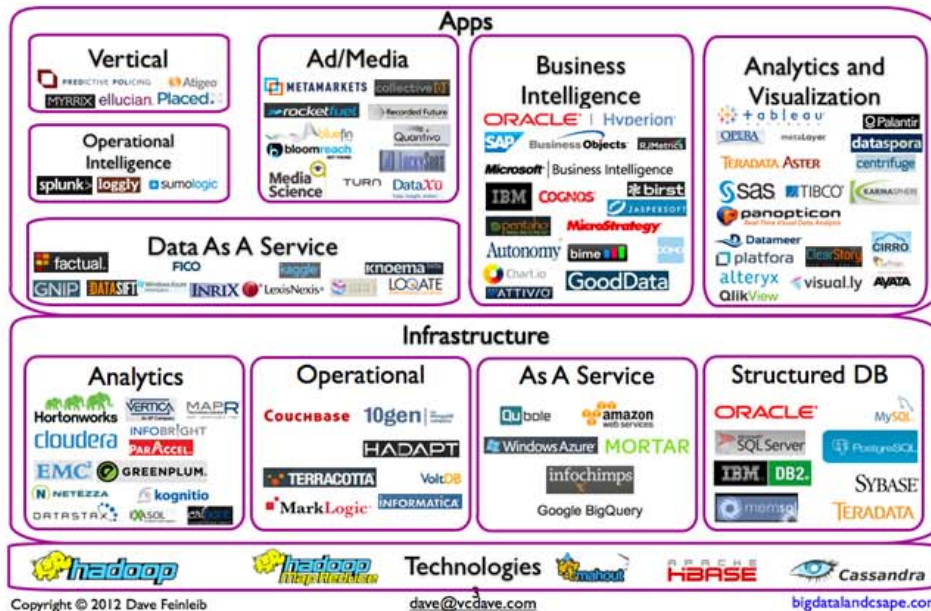
Industrial Age



Information Age

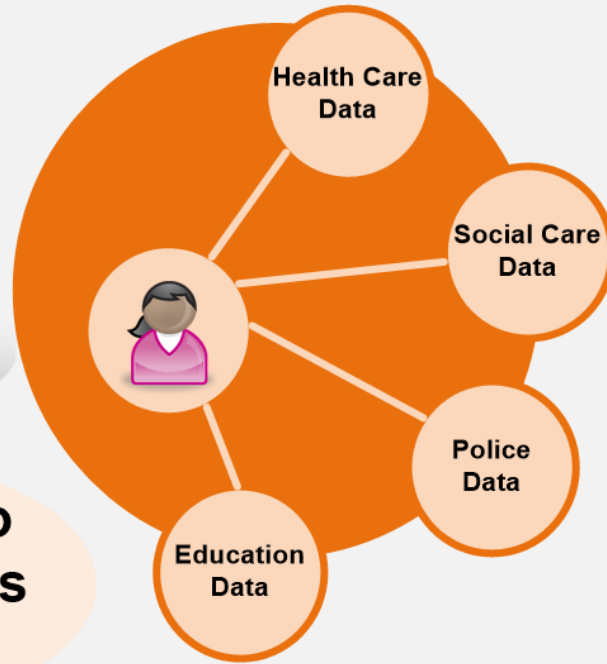


The Big Data Landscape



Volume: 12 TB of Tweets per day.
Variety: Video, images, voice, text, sensors.
Veracity: Trust
Velocity: 500 million calls records analysed
 90% of all data in Cloud product in last two years.
 2,500,000,000,000,000 bytes/day – 2.5 Quintillion Bytes
 1,000,000,000 Hard disks

What to do with Big Data?



Let us be unique!

Let's have proper auditing

Let's define ownership and governance

Let us interface with the public sector over the Internet

Give it back to us ... and let us control it.

Improve Lives and Reduce Risk and Harm

Balance the Risk ... and let us decide

Let's integrate citizens into every part of the infrastructure

BIG BROTHER



theguardian Your search terms... Society Search

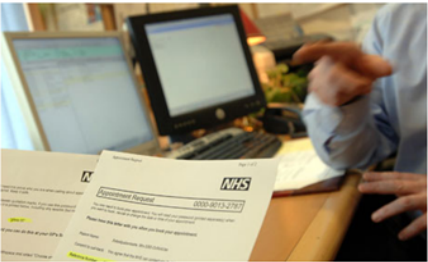
News | Sport | Comment | Culture | Business | Money | Life & style | Travel | Environment | Tech | TV | Video | Dating | Offers | Jobs

News > Society > NHS

NHS told to abandon delayed IT project

£12.7bn computer scheme to create patient record system is to be scrapped after years of delays

Denis Campbell, health correspondent
The Guardian, Thursday 22 September 2011
Jump to comments (44)



The NHS has spent billions of pounds on a computerised patient record and booking system, which has never worked properly. Photograph: Martin Godwin

PF1 schemes taking NHS trusts to brink of

guardianjobs

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Wednesday 21 November 2012

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HOME > HEALTH > HEALTH NEWS

Patients will view their NHS records online in three years

NHS patients will be given online access to their health records in the next three years under plans to be announced by the Government today.



The move for online health records comes despite the decision by Andrew Lansley, the previous health secretary, to cancel a massive NHS national database. Photo: ALAMY



By Robert Winnett, Political Editor
7:00AM GMT 13 Nov 2012

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PROMOTIONS >

HEALTH MOST VIEWED

TODAY PAST WEEK PAST MONTH

1. Flu vaccine effectiveness exaggerated, scientists claim
2. Women suffering liver disease 'because they try to drink like men'
3. Henley hit by 'mutant super rat' invasion
4. The problem with perfection: Is it all right for girls just to be all right?
5. 'Rising tide' of liver disease due to obesity, alcohol and infections, Prof Dame Sally Davies warns

EDITOR'S CHOICE >

Rowan Atkinson: Goodbye, Mr Bean?



Doctors' surgeries will have to set up services to allow anyone to see their health files, book appointments and order repeat prescriptions on the Internet.

The new campaign is being spearheaded by Jeremy Hunt, the Health Secretary.

"Looking after their own health, and the health of their families needs to be as straightforward as possible.

"Looking after our health should be easy — in an age where people can do their banking or shopping online, it should be just as simple to view your health records, order a repeat prescription or book a GP



dreich27

11/13/2012 06:02 PM

1) is this in the **interest of people whose hypochondriac and worrying tendencies** are made worse by all the medical information on the internet?

2) how much will it **cost**?

3) what's wrong with the current system where you can **request your records from the surgery?**

4) how will it be **secured a) from hackers b) from your boss c) from your intimidating other half or family member** who is standing next to you at the computer and demanding that you log in?

5) is this going to cause doctors to have to go through your records with a **fine-toothed comb to weed out an ill-advised comment made in 19-when-ever** when the idea that patients could sue or access their records online was very remote.





Thierrytt

11/13/2012 04:00 AM

My partner's doctor here in France hands over the hard copy of any documents to her. This includes notes and letters passed between doctors and other specialists. **He keeps an electronic copy. This means we have all the x-rays, DVDs of MRI scans etc.** He gives a regular print out of any notes made.

The notes are released on the processing of the Carte Vitale which has a photo of the patient.

Other doctors can have access to her records through the Carte Vitale system.

It puts the patient at the forefront of treatment.

When I moved to France from the UK some years ago I obtained a photocopy of my medical records. It contained notes in code which **made no sense to me whatsoever.** I could find nothing regarding hospital treatments, the fact I had broken my leg when 11 yrs old, had my tonsils out etc. No vaccines as a child or adult were noted. **The french doctor said the notes were worse than useless.**

Why is the **NHS** so out of date?





ivan_opinion

11/13/2012 06:26 AM

NFN – Normal for Norfolk.

FLK – Funny Looking Kid.

GLM – Good Looking Mom.



Who, other than **hypochondriacs, narcissists, neurotics, ME 'sufferers', DLA scroungers and the mentally ill, wants this?** And, for all the groups mentioned, this will only make them feel worse, do no good at all and increase costs. How much will it cost, how secure will it be and how late will it be? **If doctors cannot be frank in the notes, they will end up being defensive and guarded**, which will be bad for everyone. Sadly, **NFN, FLK and GLM** have largely disappeared but this is the death knell.

The truth is, however, that a patient-accessible record system **is essential for the dismantling and selling-off of the NHS**. Alternative providers, doctors and Prince Charles' quacks and businesses run by Hunt and Lansley's mates **will be able to read them, print them, import them and invoice services accordingly**. "Oh, I see you've never had any of my very special water, never tried acupuncture, had this scan." That is what this is about, whether you agree with it or not.



Thierrytt

11/13/2012 05:13 AM

The problem is that the doctors may not be telling the "truth". My partner was **diagnosed as a psychiatric case when she lost use of her legs**. A letter from the neurologist who examined her said she had had an **MRI scan. That had never taken place. All doctors treating her afterwards took that as gospel.**

I reviewed her case and discovered that and **other serious errors by other neurologists, rheumatologist and ophthalmologists.**

In the end I requested the MRI scan and all accompanying tests for **Multiple Schlerosis and every one proved positive**. A review of all previous tests including one when she had lost vision in one eye had pointed to MS.

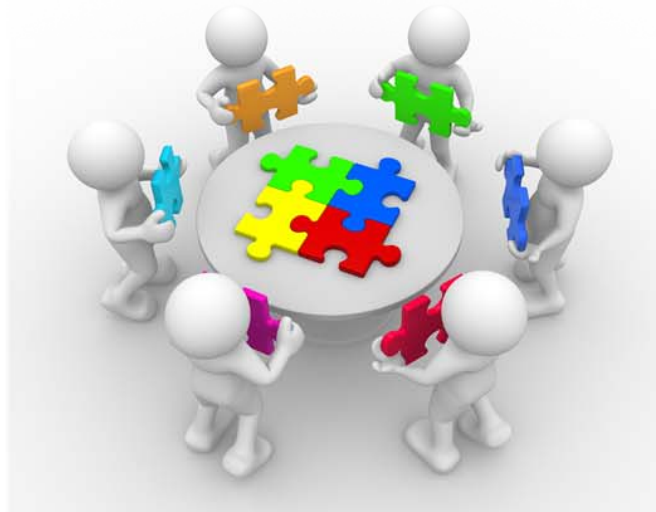
Maybe **knowing the patients can see all the results of tests etc may lead doctors to be more careful.**

My partner is french and medical records rest with the patient. The doctor keeps an electronic copy.



The Challenges of Big Data: Future Risks, Governance and Trust

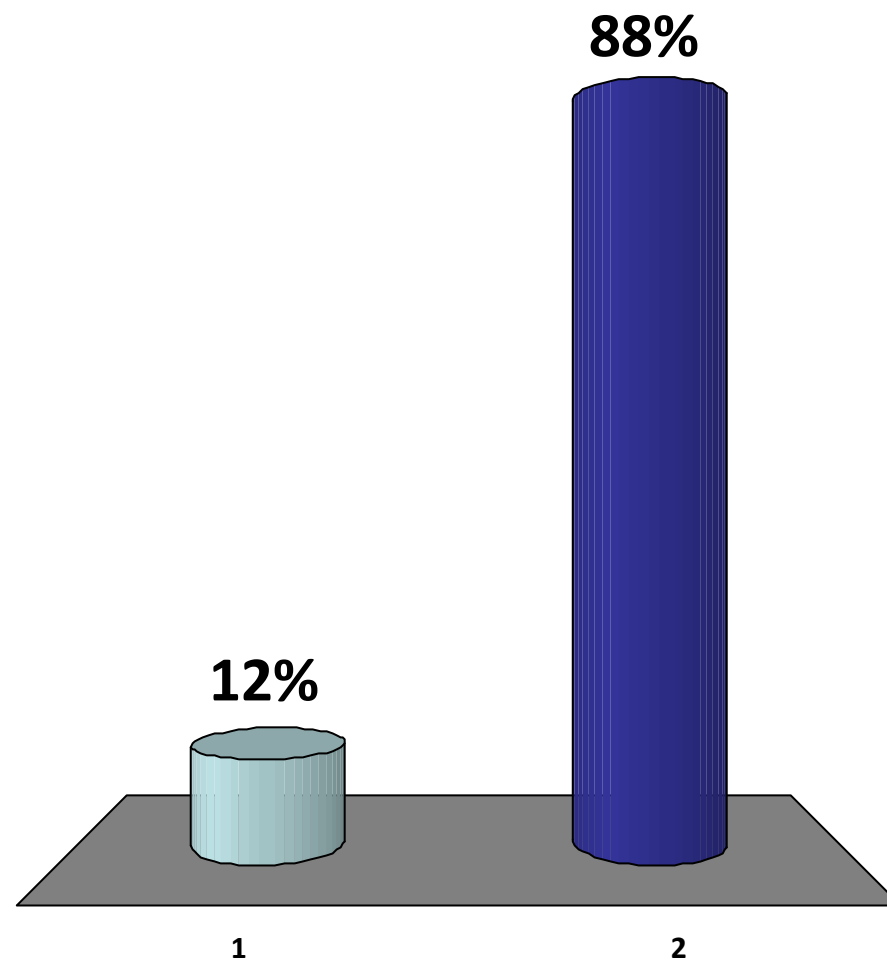
Some Results ...



Prof Bill Buchanan, Edinburgh Napier University

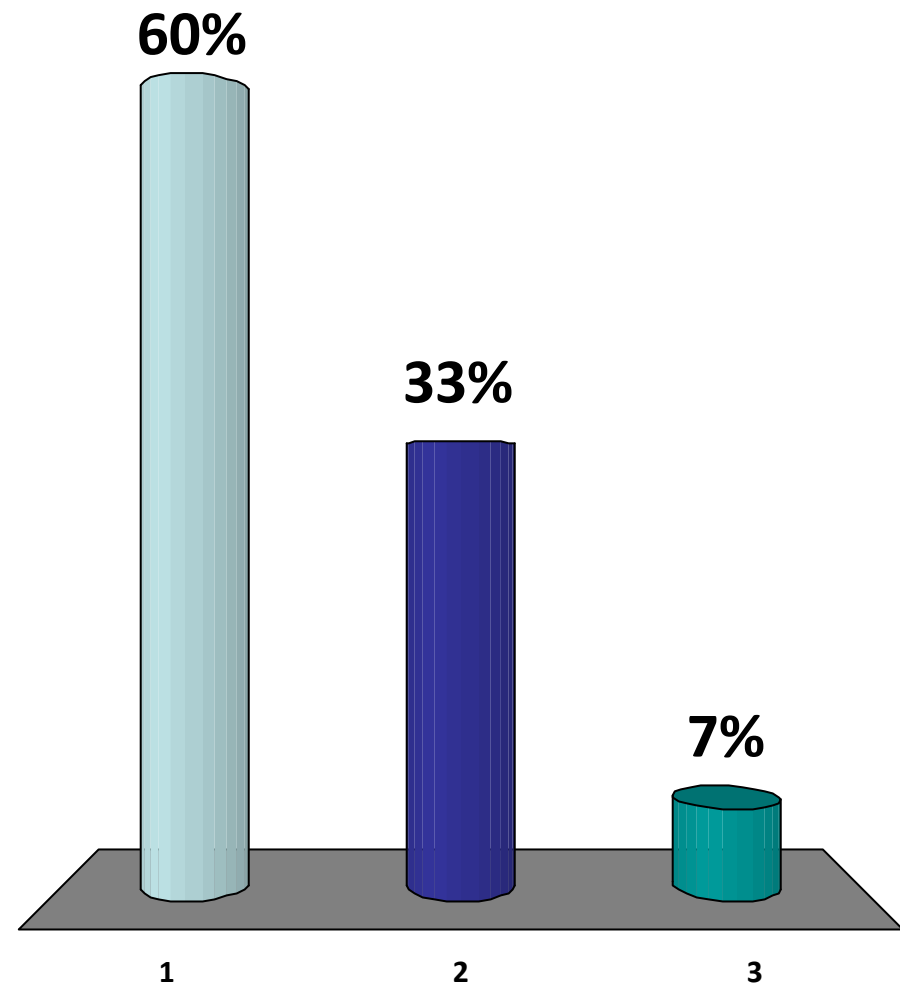
Within three years do you think you will be able to get access to your EHR?

- 1. Yes.
- 2. No



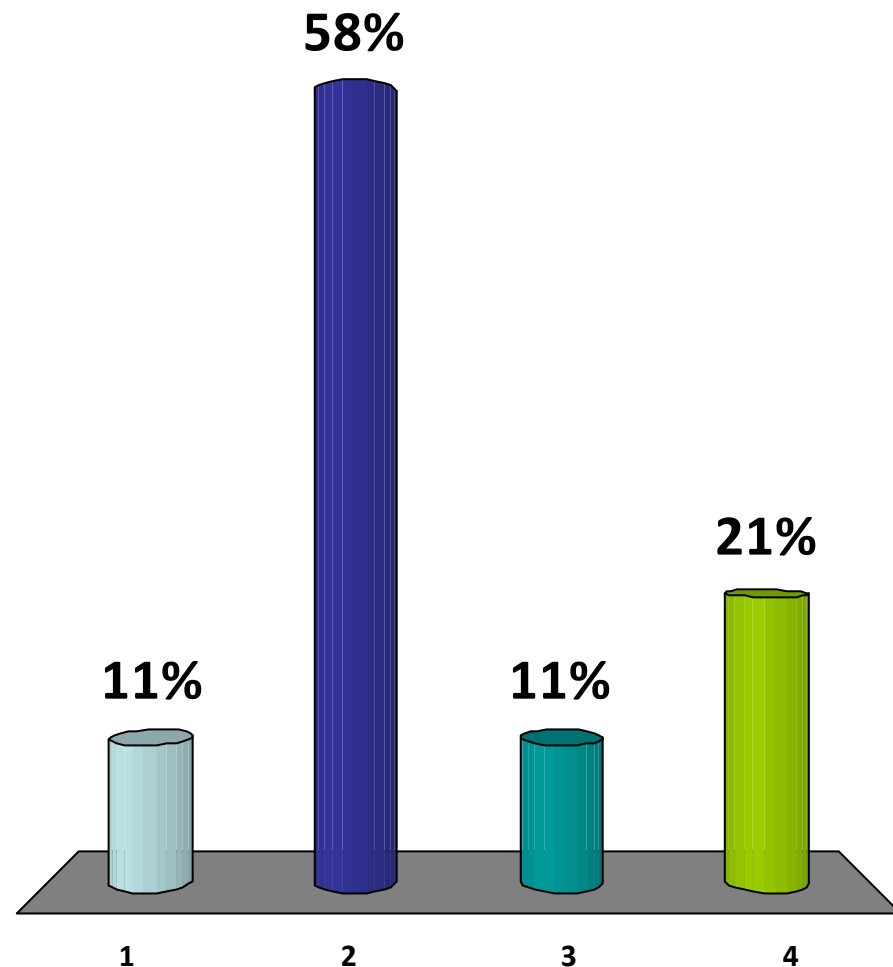
If you had access to your EHR, what would you want access to?

1. All of your record.
2. A summary of the record.
3. None of the record.



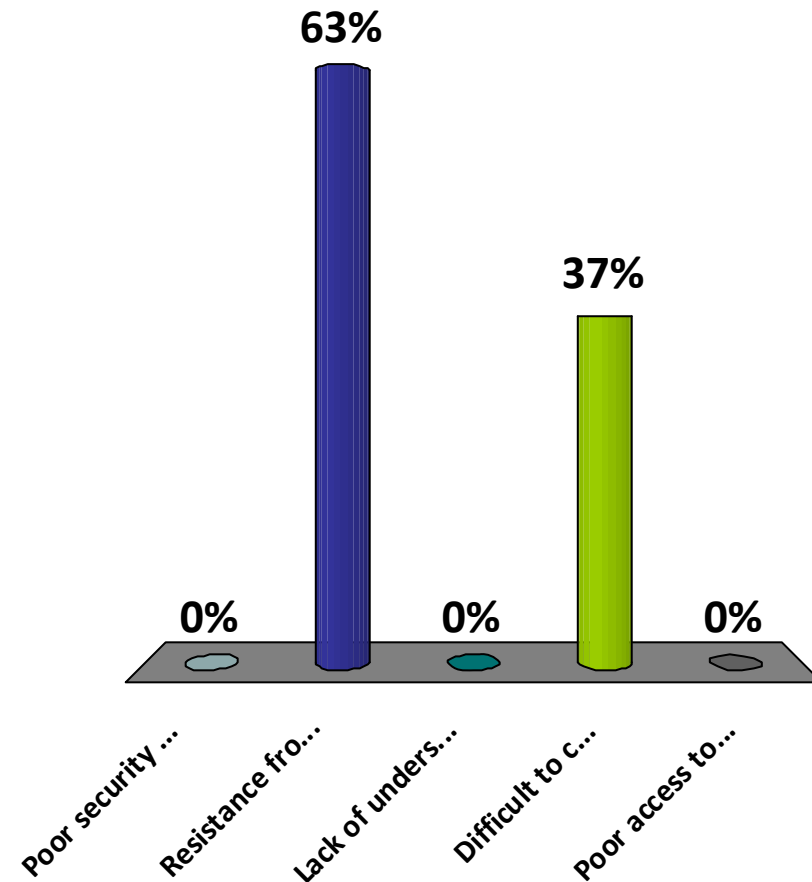
If you had access to a EHR, when is the situation that you would most value it?

1. All the time.
2. When you were ill.
3. When someone in your family was ill (and you had their consent to access their record).
4. When you disputed your treatment.



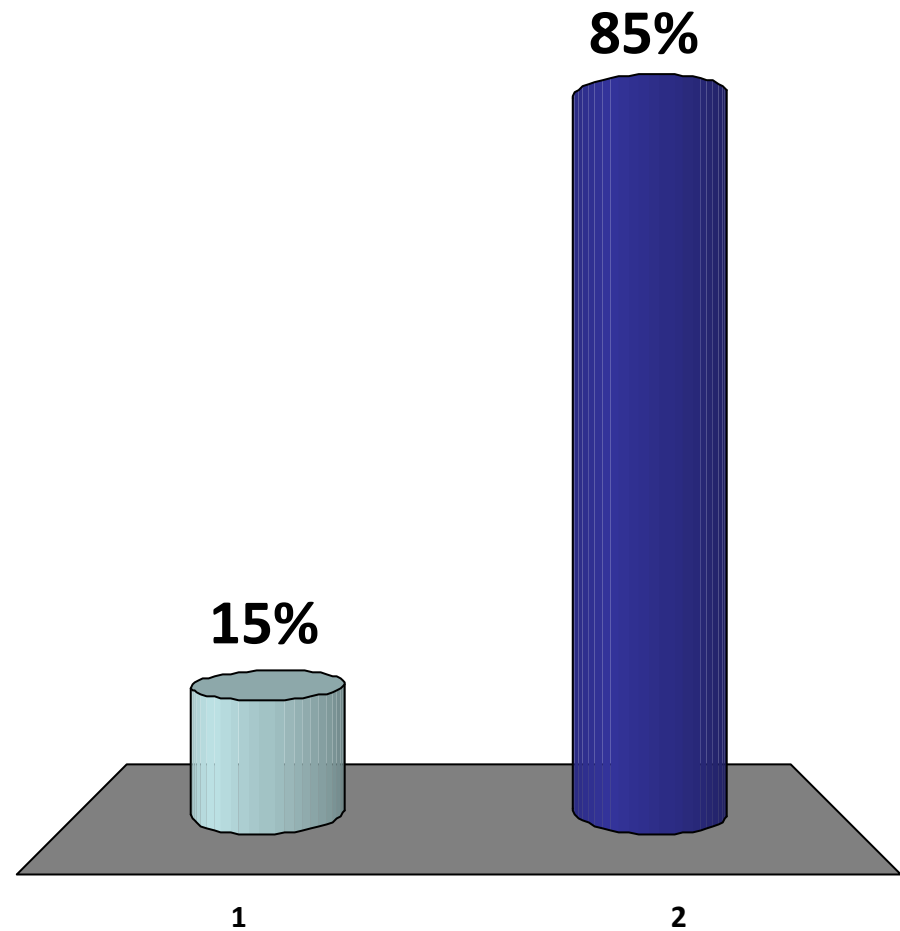
What is the greatest issue in providing citizen access to EHRs?

1. Poor security within the health care system.
2. Resistance from health and social care professionals.
3. Lack of understanding of the usage of the Internet from citizens.
4. Difficult to change existing systems to allow access.
5. Poor access to the Internet.



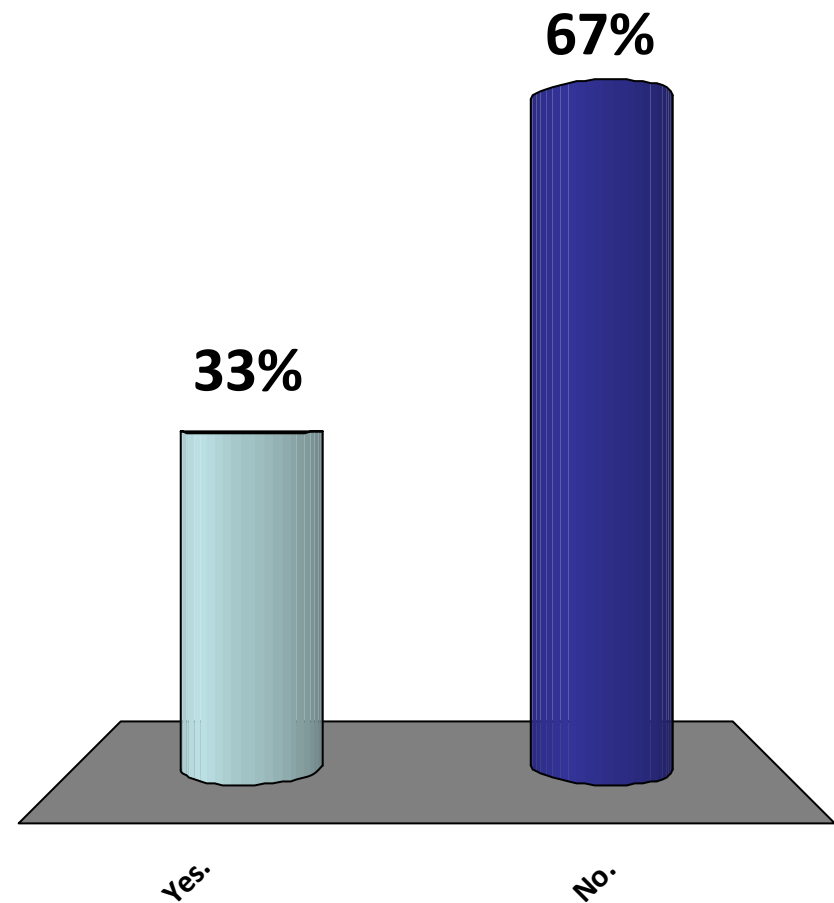
Can you book appointments with your GP on-line?

1. Yes.
2. No.



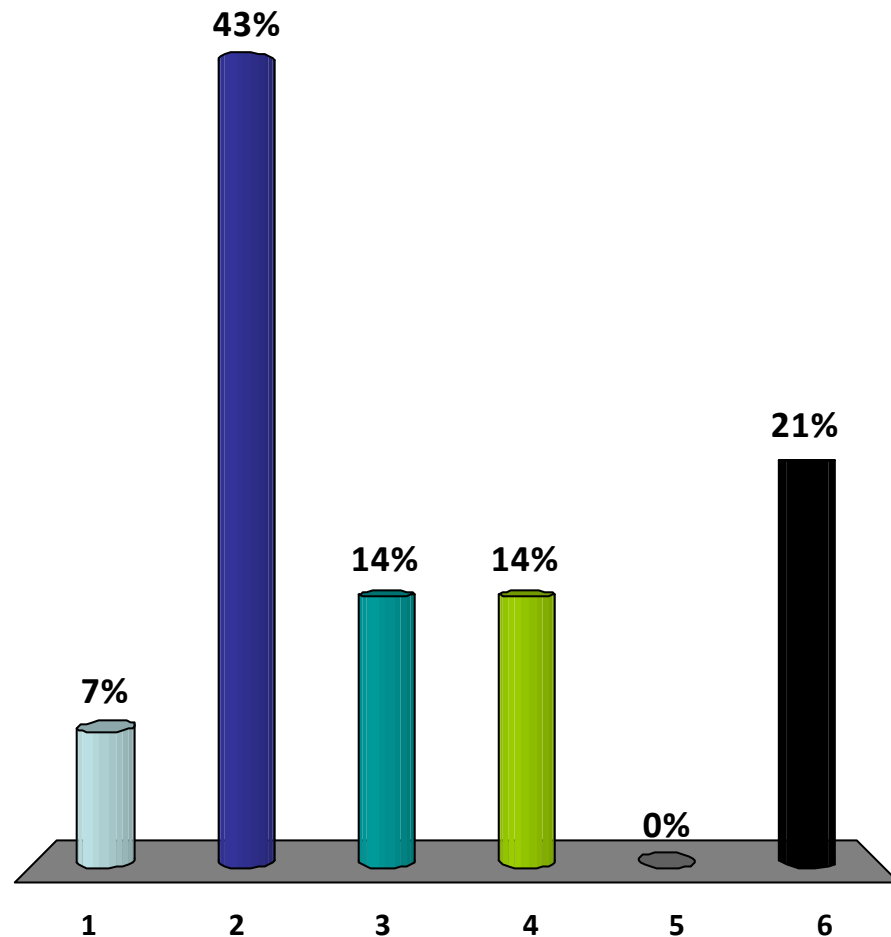
As a citizen/patient, do you have any electronic communications with the health/social sector?

1. Yes.
2. No.



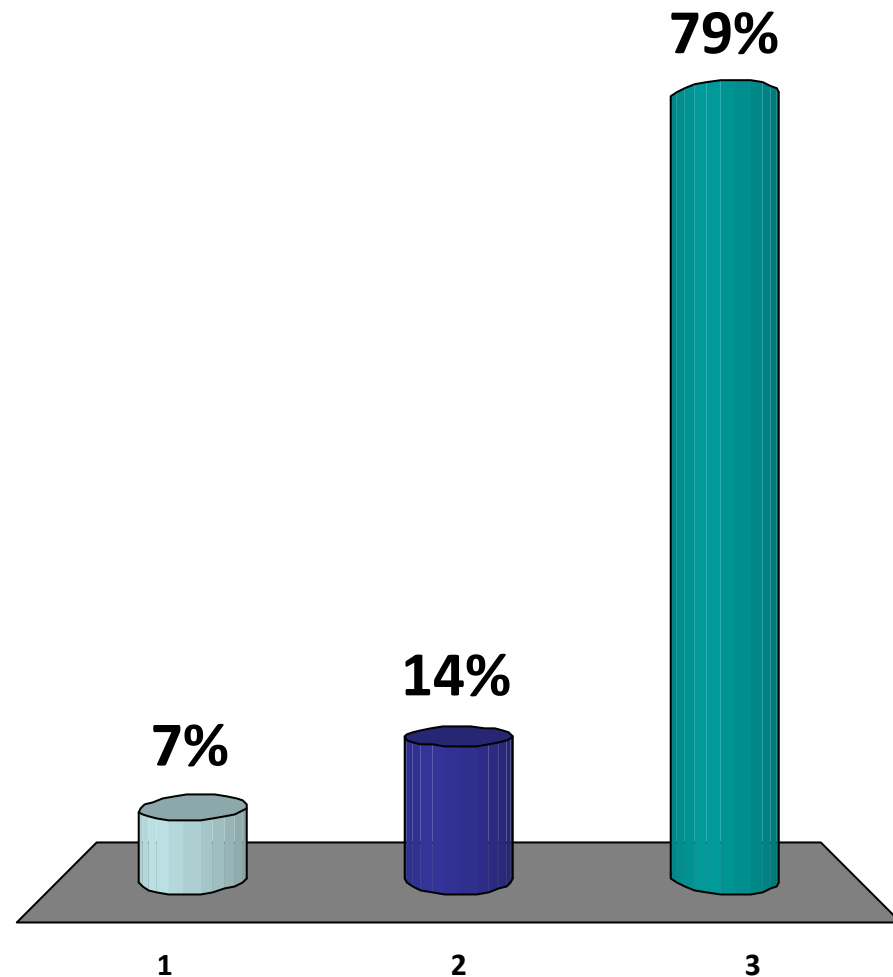
As a citizen, which service would you like most?

1. View health record.
2. Book appointments.
3. Email with clinical staff.
4. Video conference with clinical staff.
5. Order repeat prescriptions.
6. Manage my child's health record.



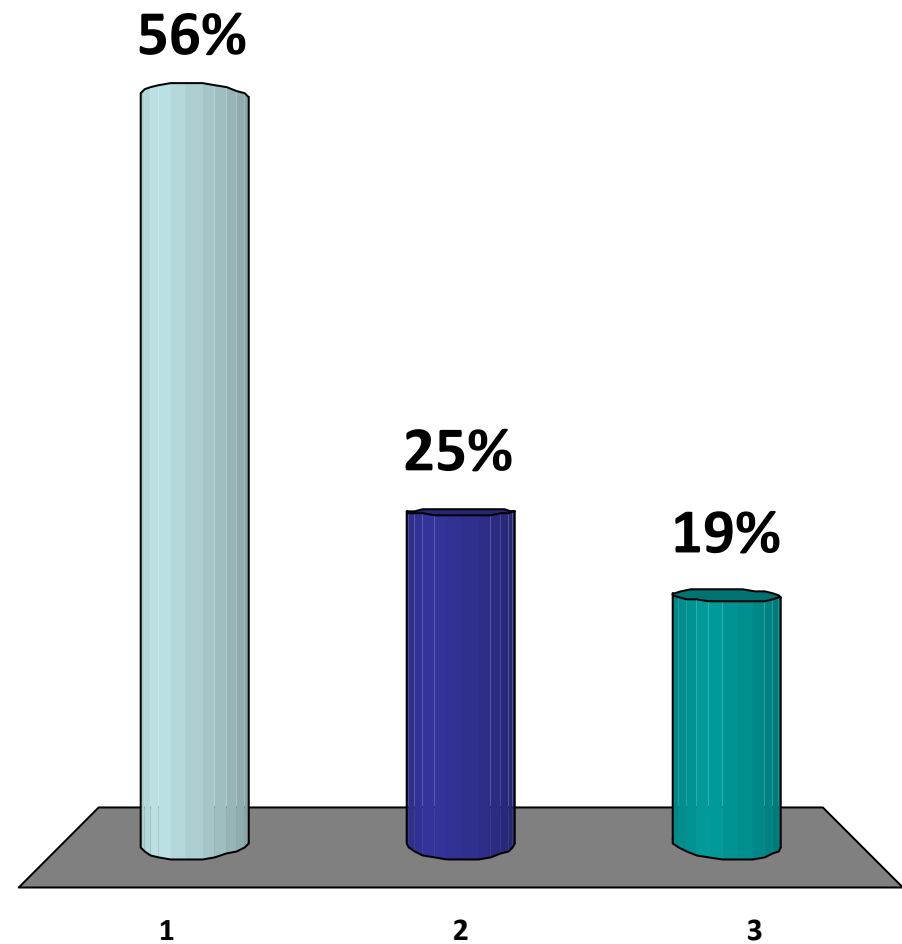
How many different logins to you currently have?

1. 1-5.
2. 6-10.
3. More than 10.



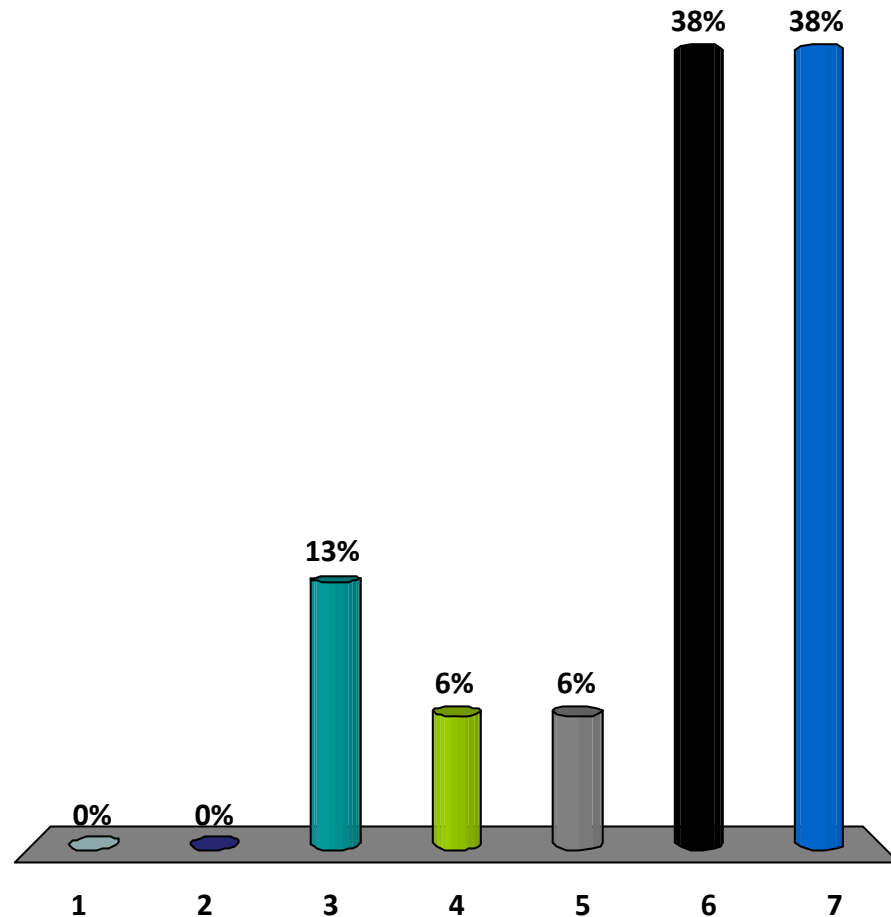
How many different passwords you have?

1. 1-5.
2. 6-10.
3. More than 10.



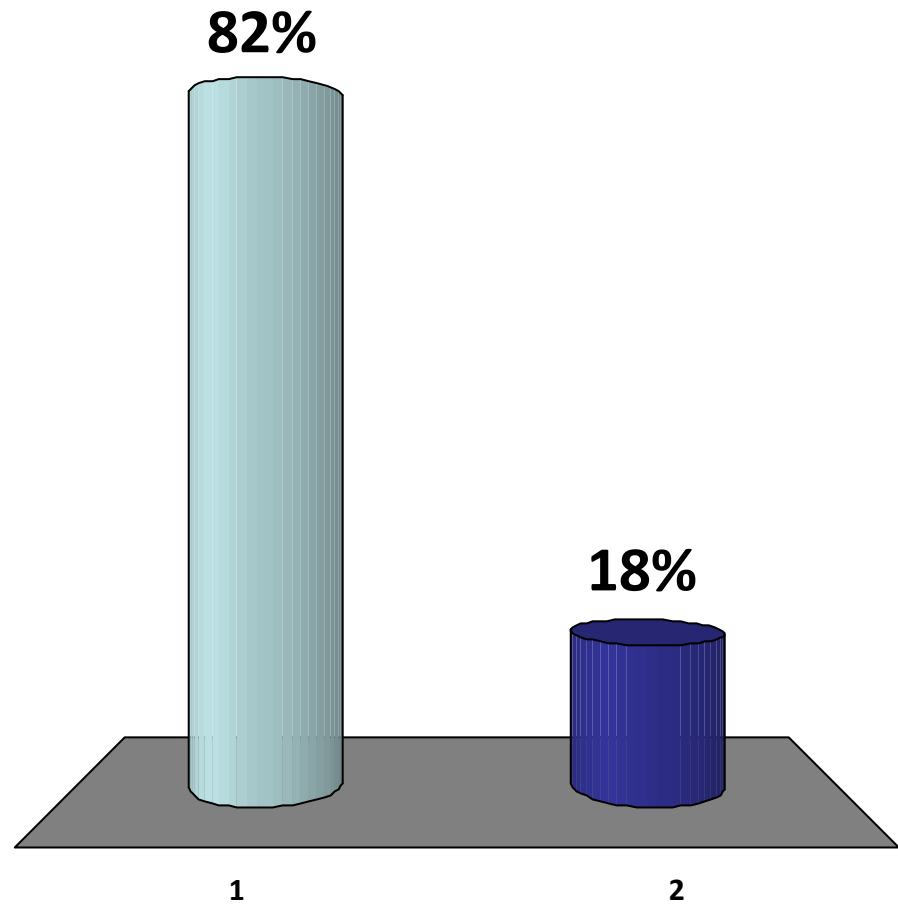
Which company would you trust to provide your identity?

1. Facebook.
2. Microsoft Live.
3. Linkedin.
4. Twitter.
5. Google.
6. UK Government ID Access (HMRC).
7. Scottish Government ID Access.



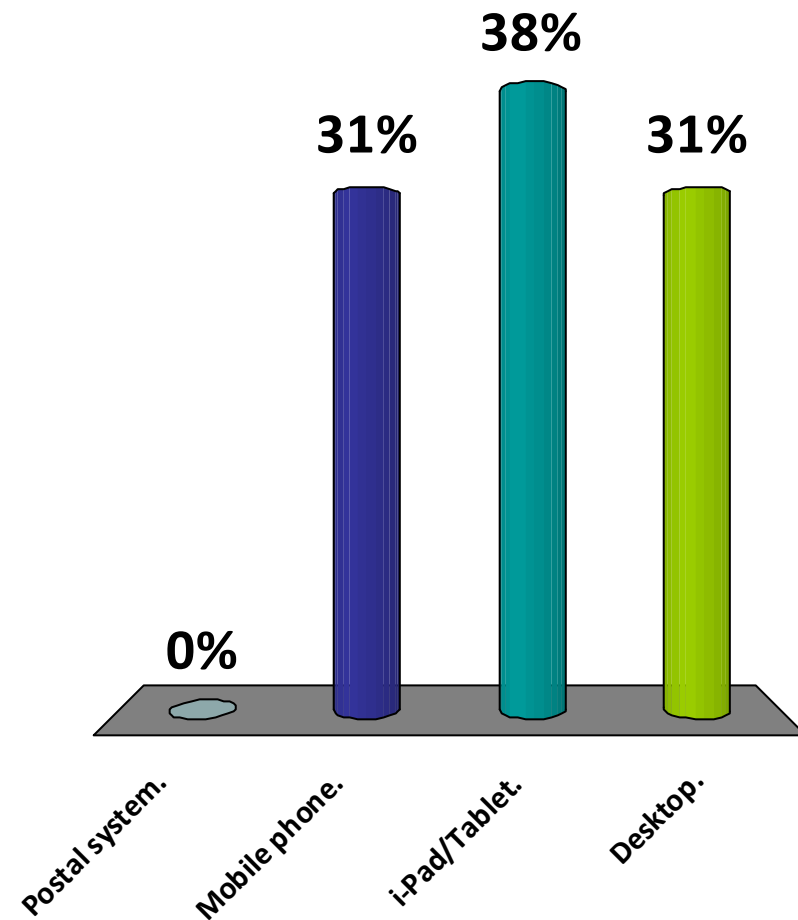
Would you trust your family to view your health record?

1. Yes.
2. No.



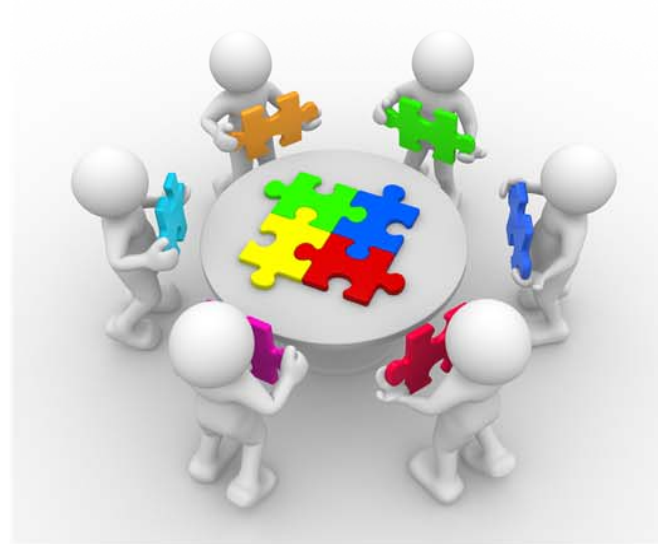
Which access device would you most likely use to keep up-to-date with your health?

1. Postal system.
2. Mobile phone.
3. i-Pad/Tablet.
4. Desktop.



The Challenges of Big Data: Future Risks, Governance and Trust

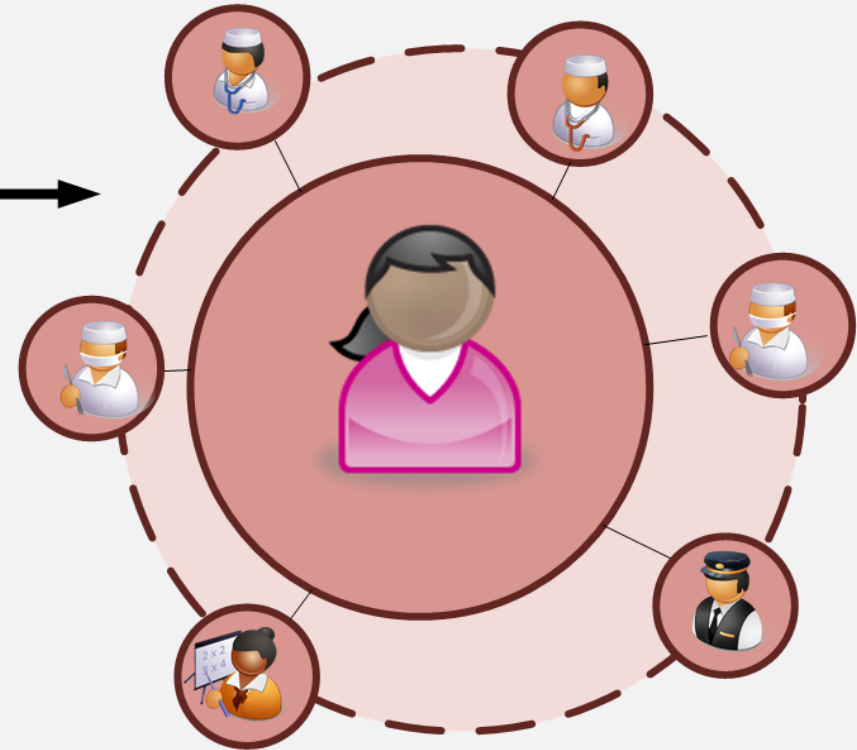
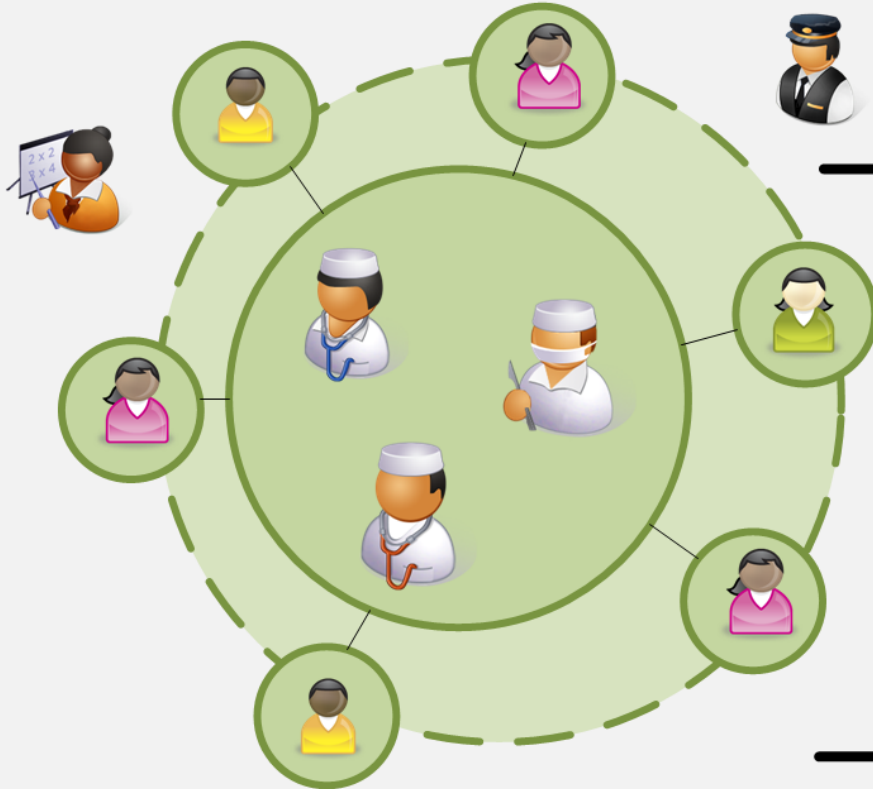
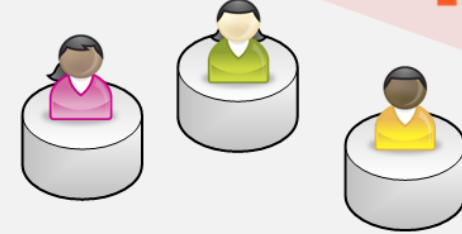
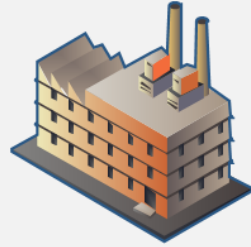
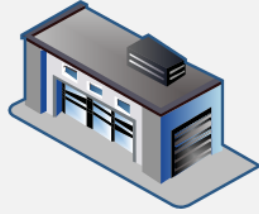
Opportunities



Prof Bill Buchanan, Edinburgh Napier University

Industrial Age

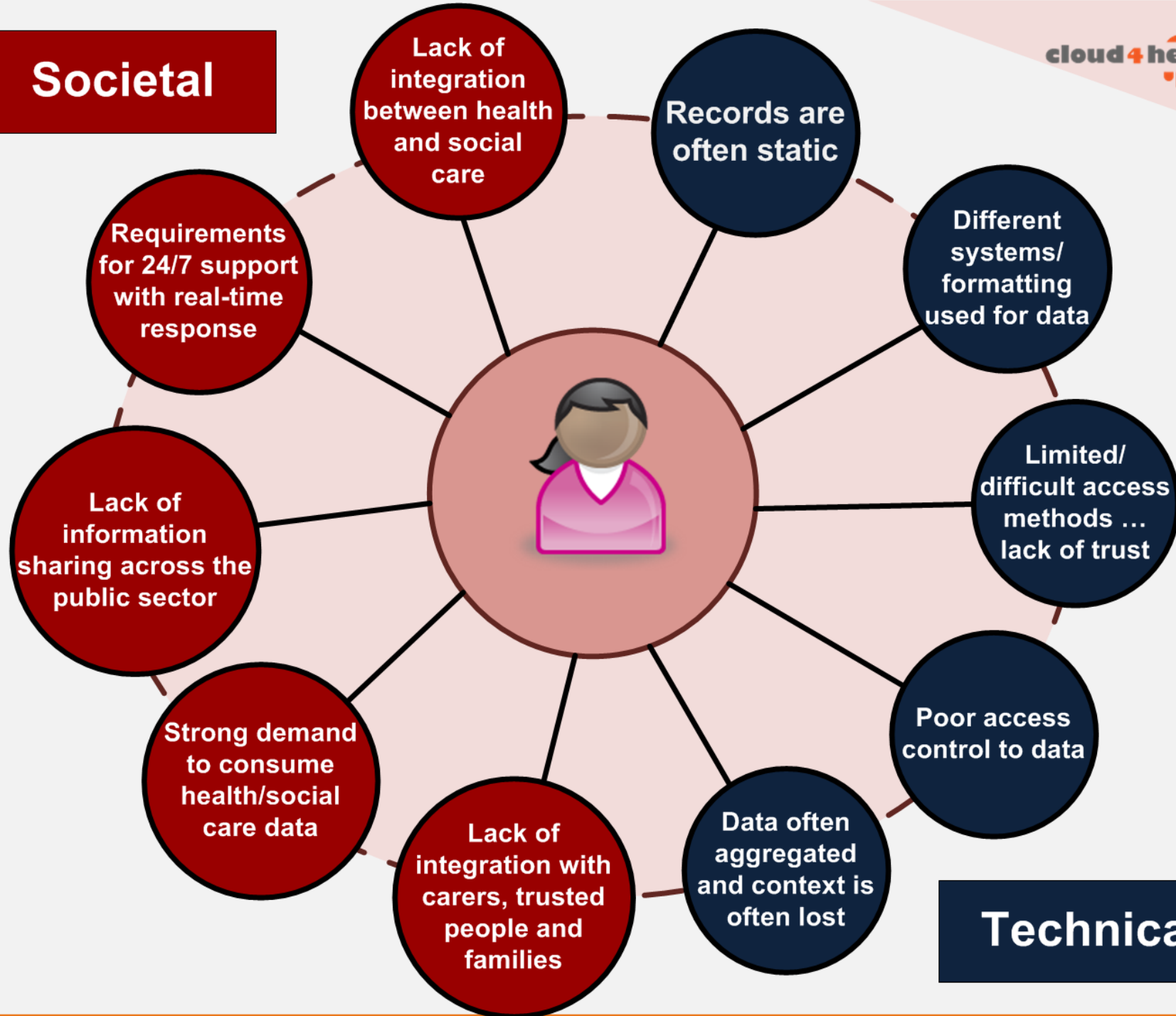
Information Age



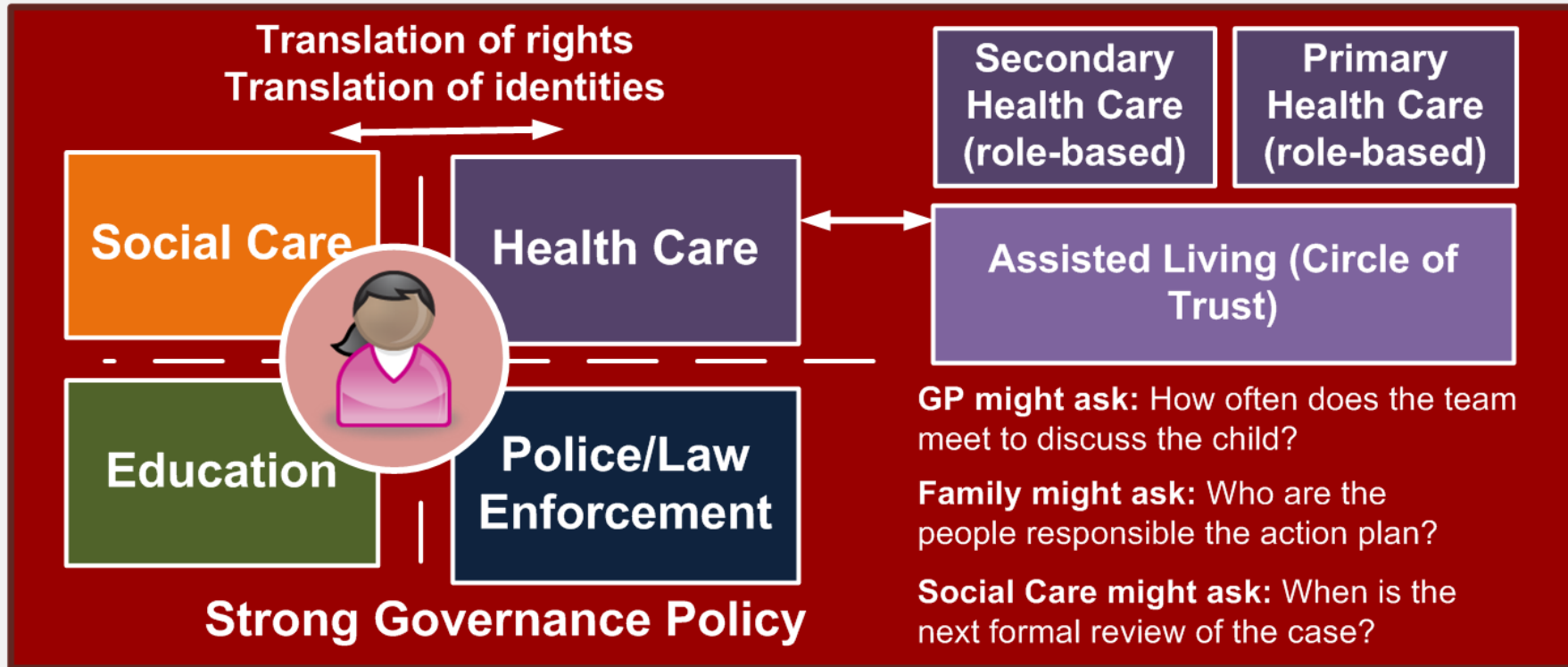
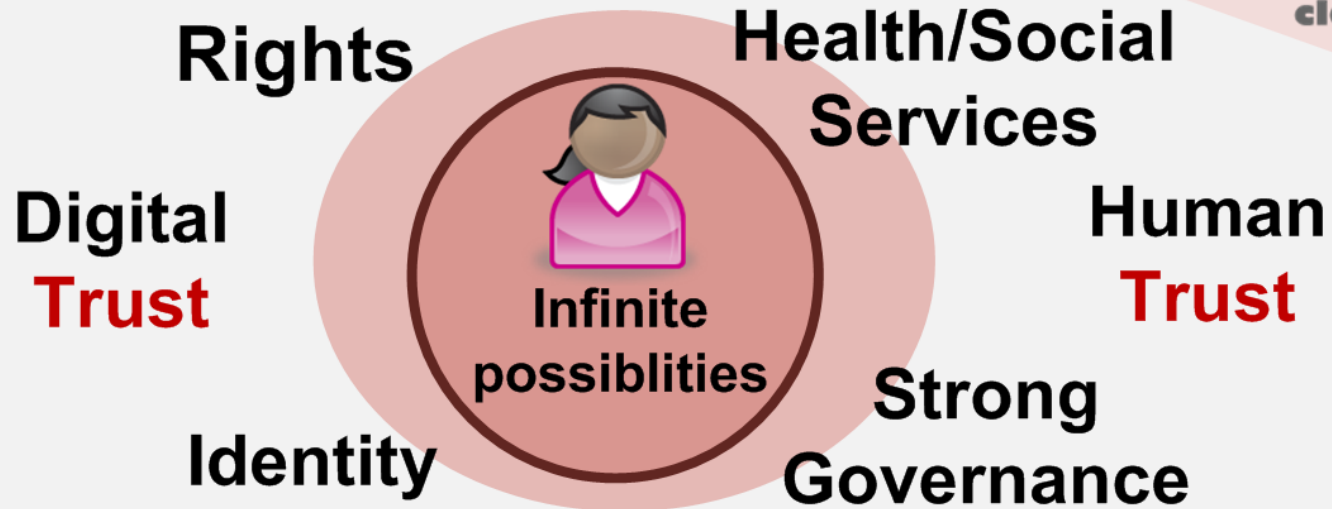
**Centralised, Non-integrated,
Ad-hoc, Clinician Focused, Reactive,
Clinician Control of Records**

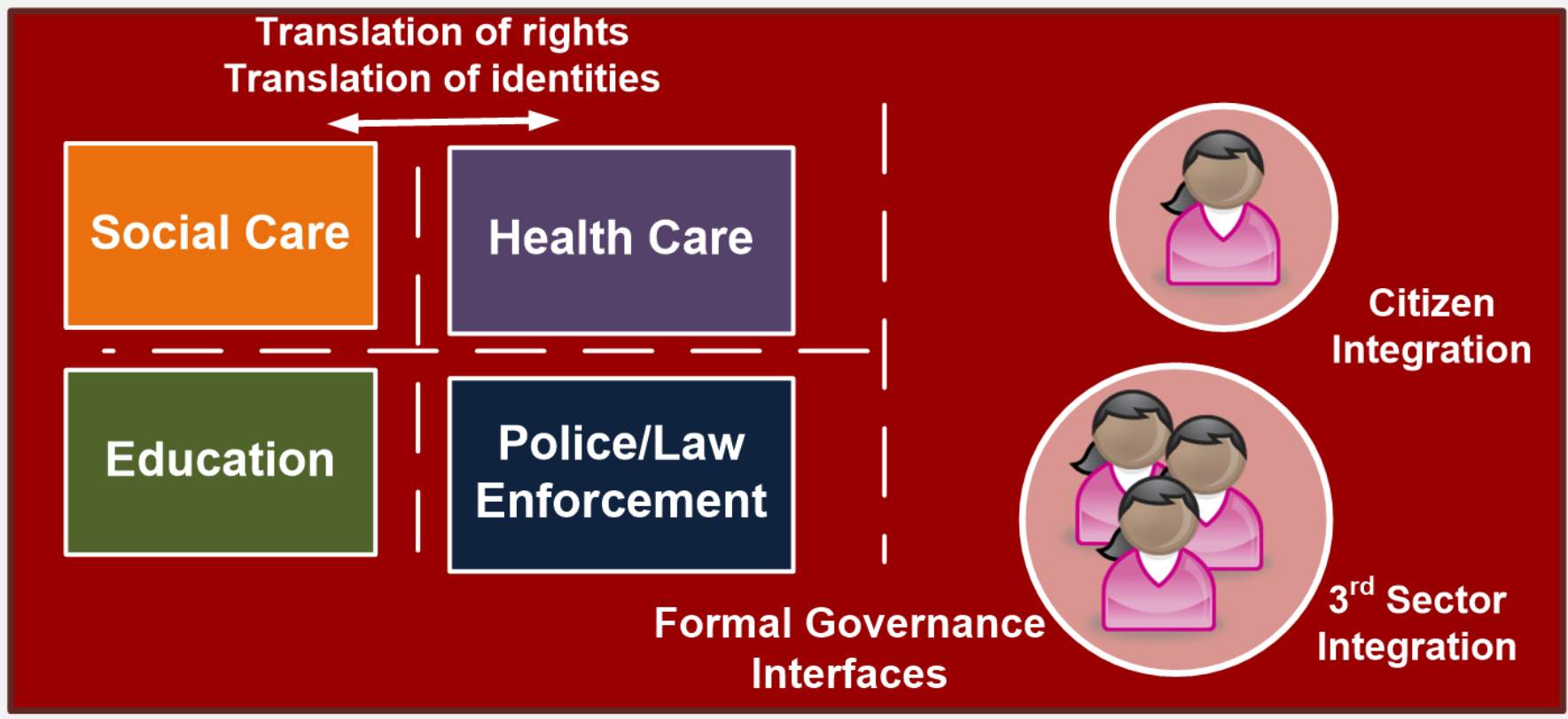
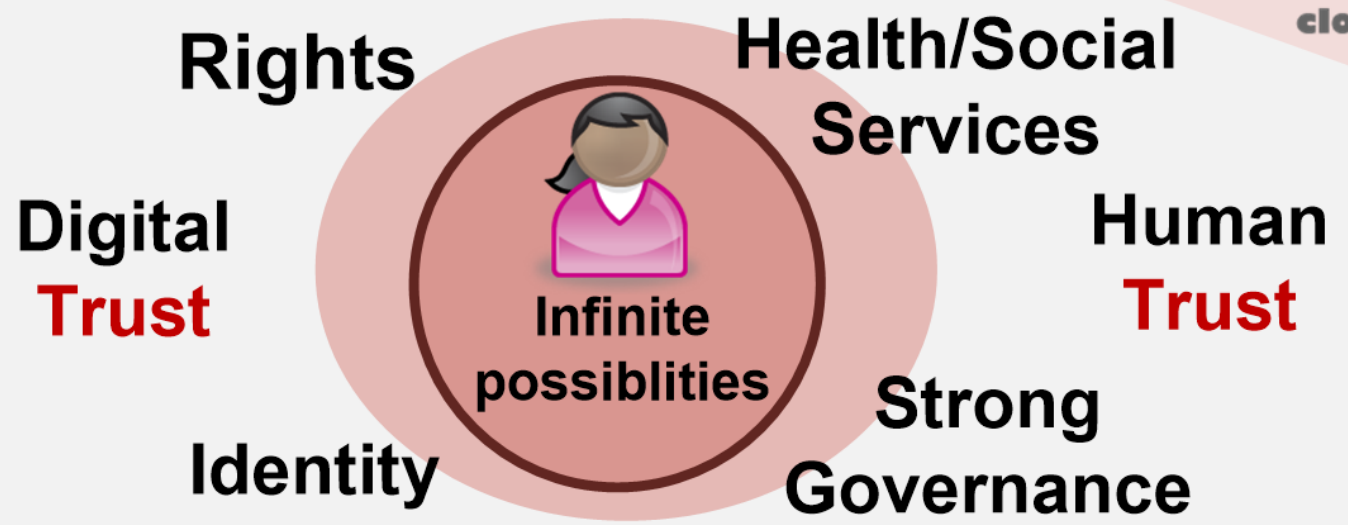
**Distributed Patient Care, Holistic,
Patient Focused, Pre-emptive,
More Patient Control of Health**

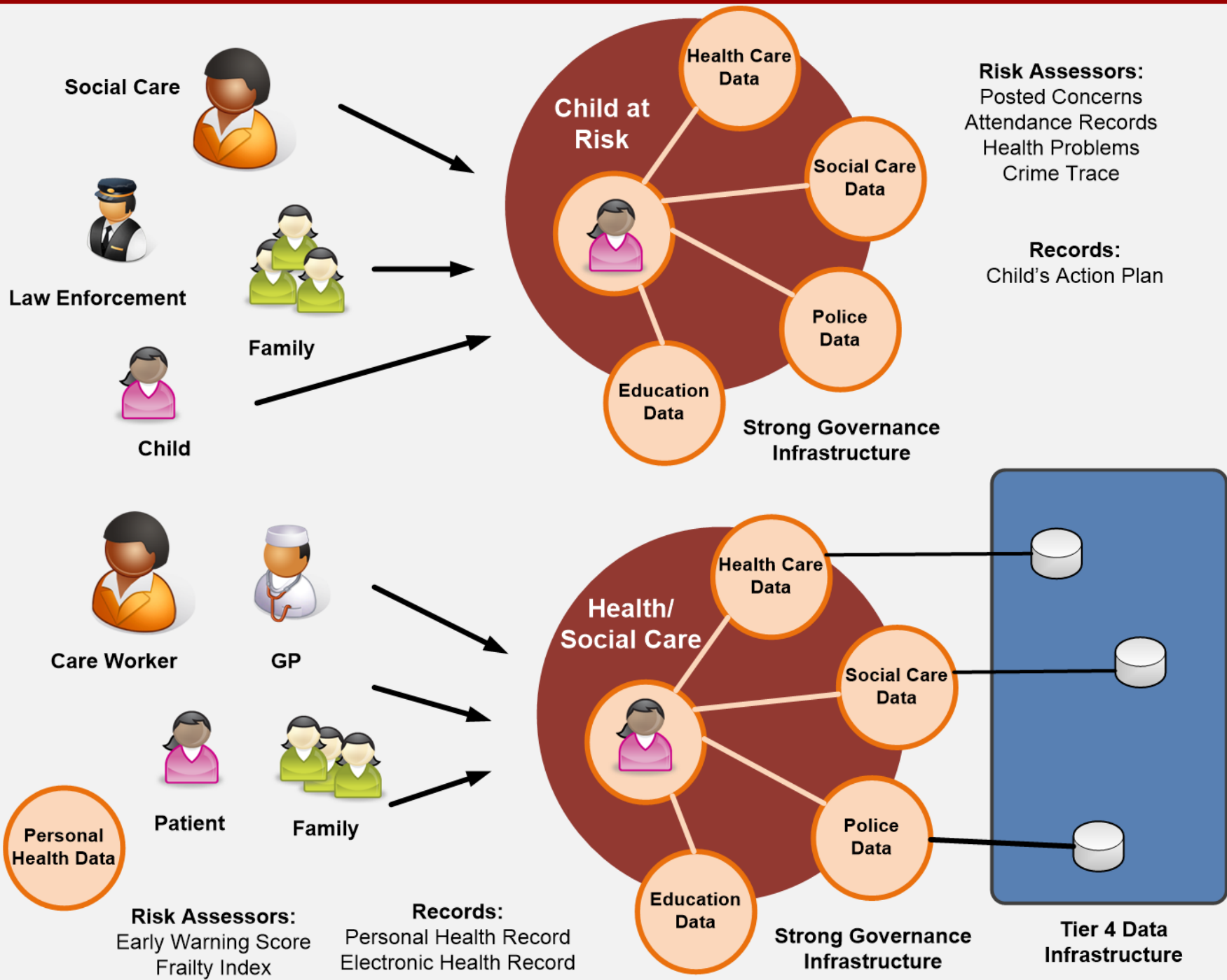
Societal



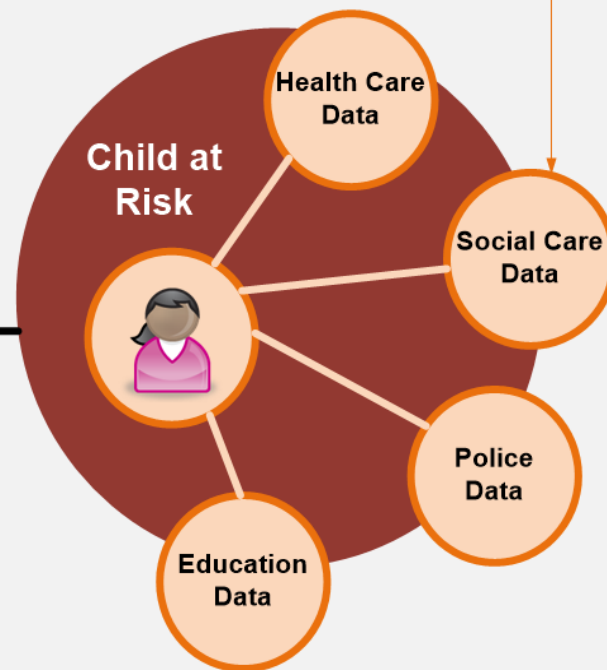
Technical



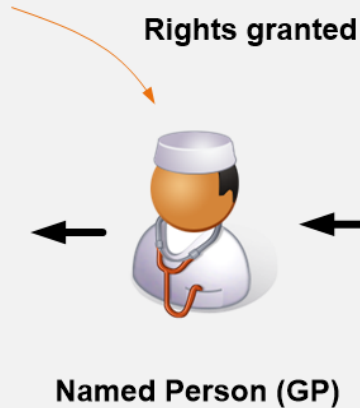


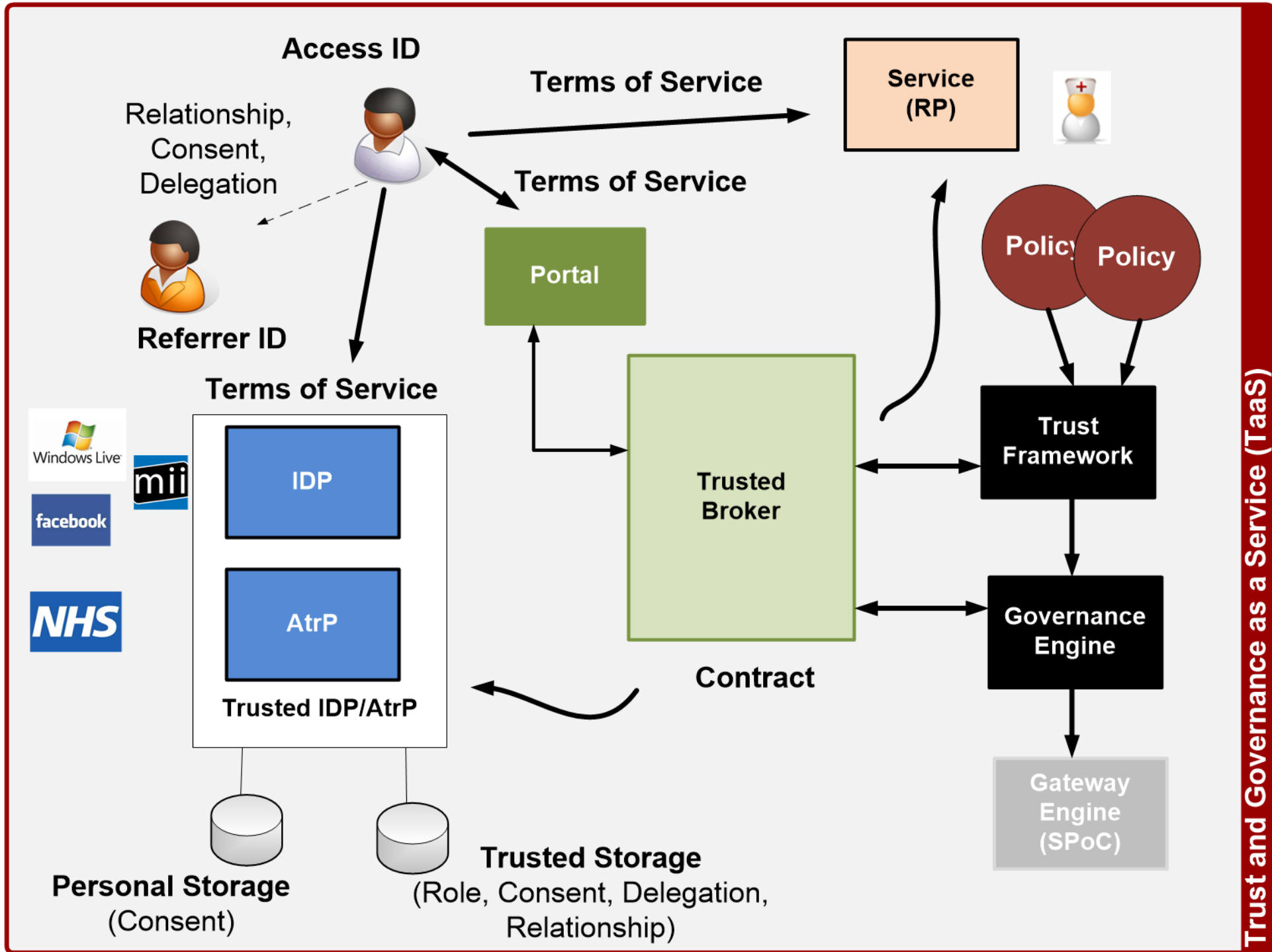


**Trust Access to Action Plan
for the Required Time Limit**

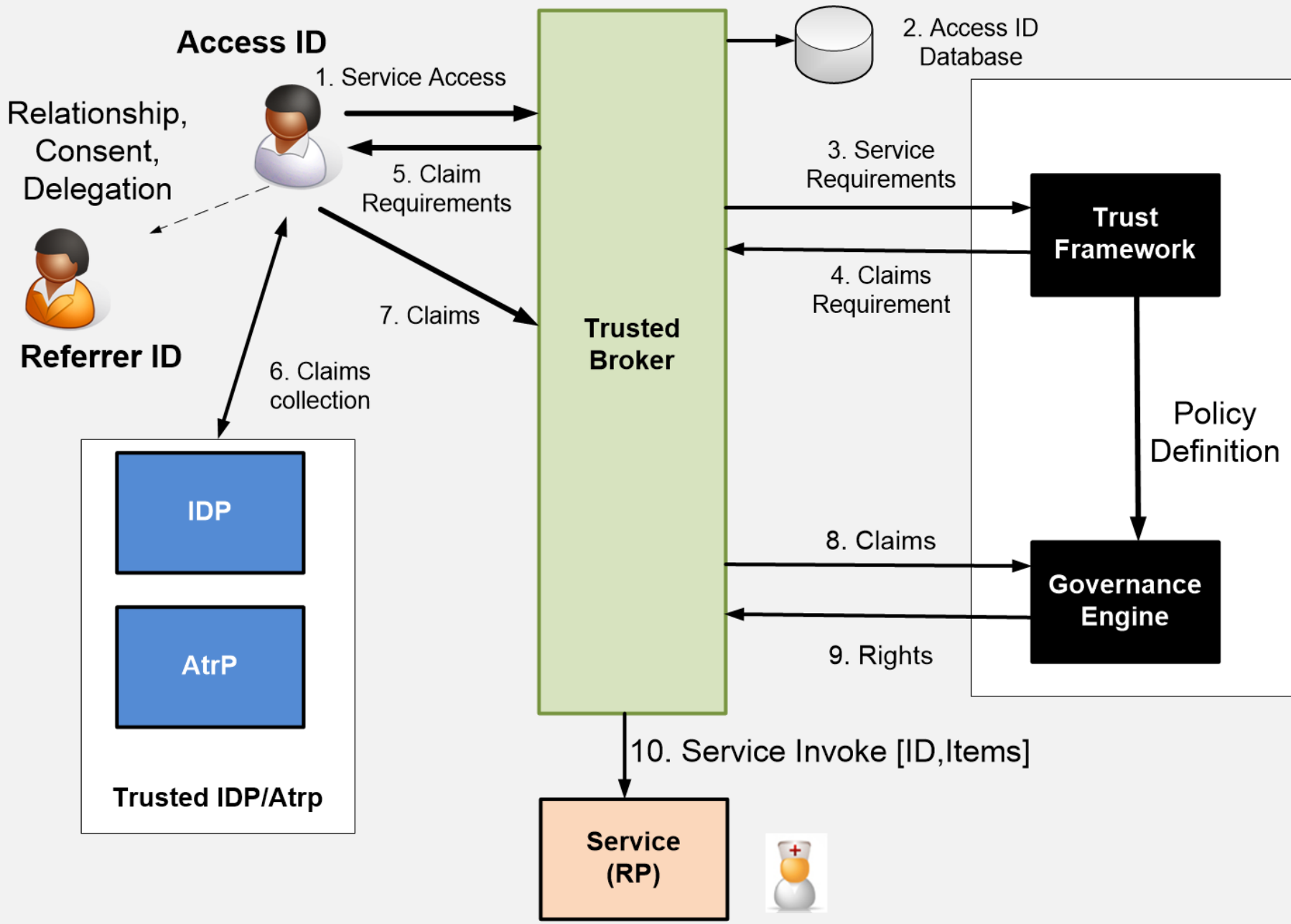


**Possible Trust Access to parts of
the Electronic Health Record**





Trust and Governance as a Service (TaaS)





murwald

11/13/2012 12:17 PM

Oh good because [...] doctors always look at me as if I am asking to look at the bloke's down the road when I ask to look at mine

It should be an absolute priority to see your own records whenever and wherever you want to



stelvio

11/13/2012 08:45

There is no money.
This is the new "Cones Hotline"

Regarding the title of this piece considering how badly most NHS IT systems are designed, implemented and function it probably means that you log on and the correct page comes up three years later.



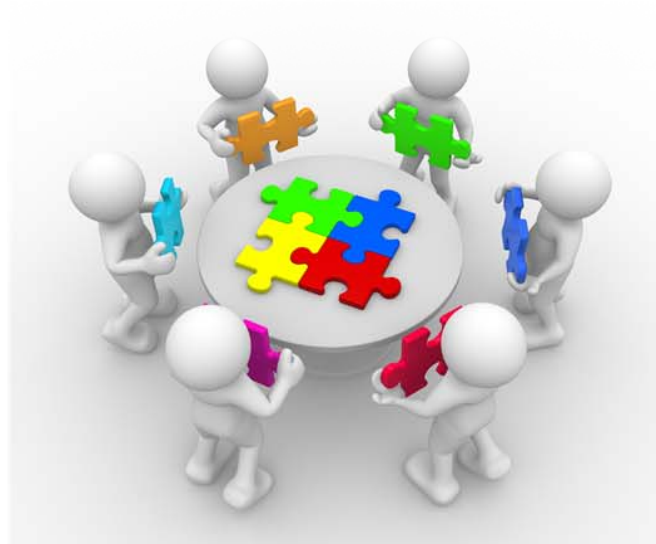
philclark60

11/13/2012 12:17 PM

Patients will view their NHS records online in three years

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