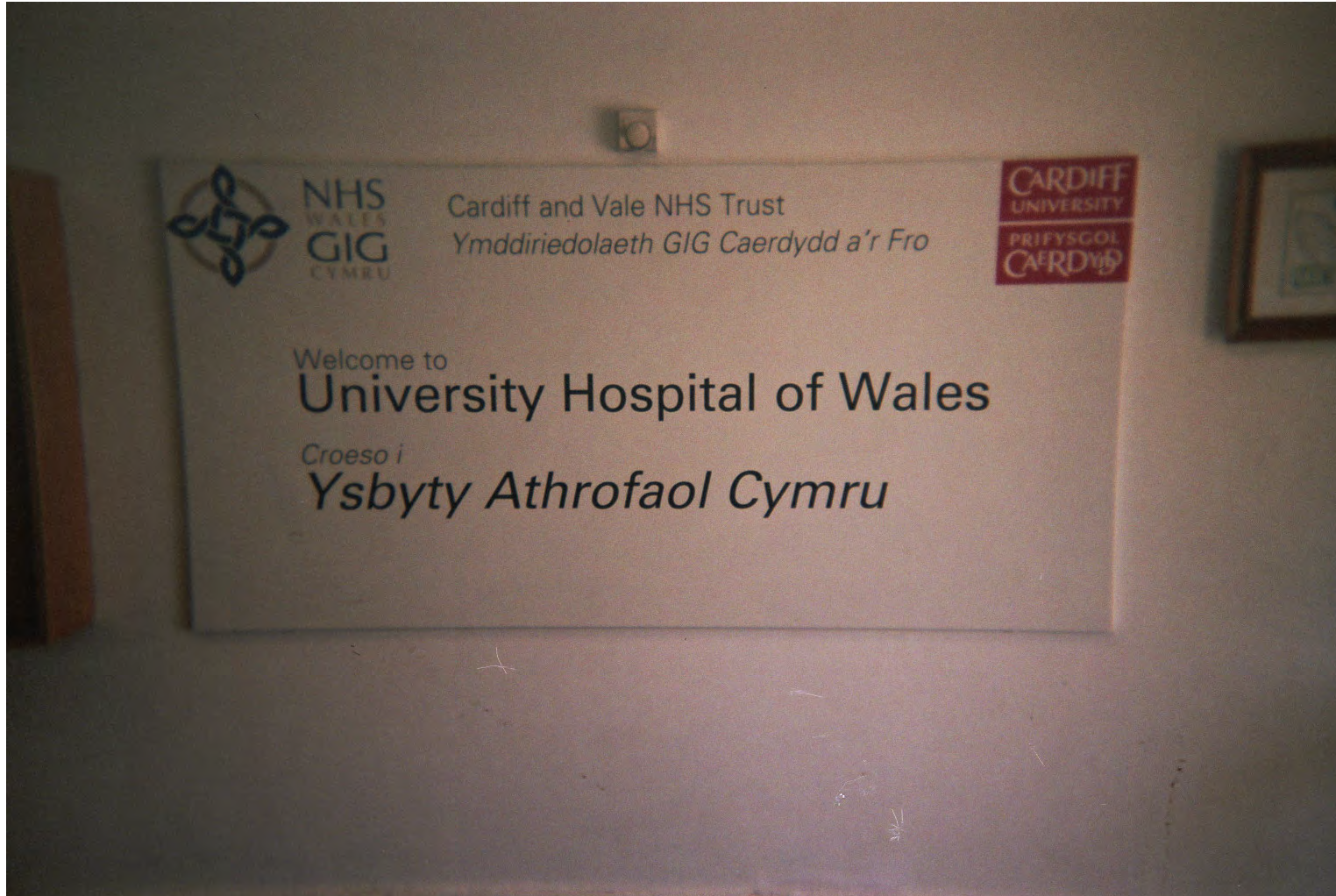




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**Cenedlaethau'r  
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**Future  
Generations**  
Commissioner  
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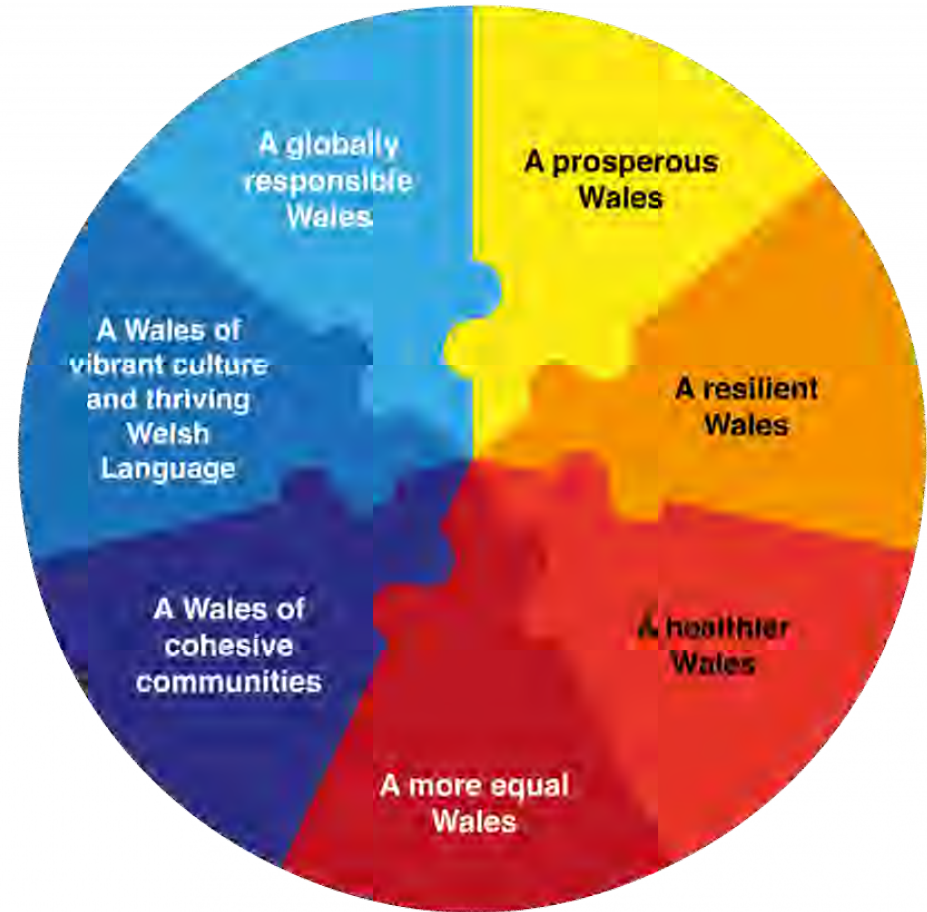
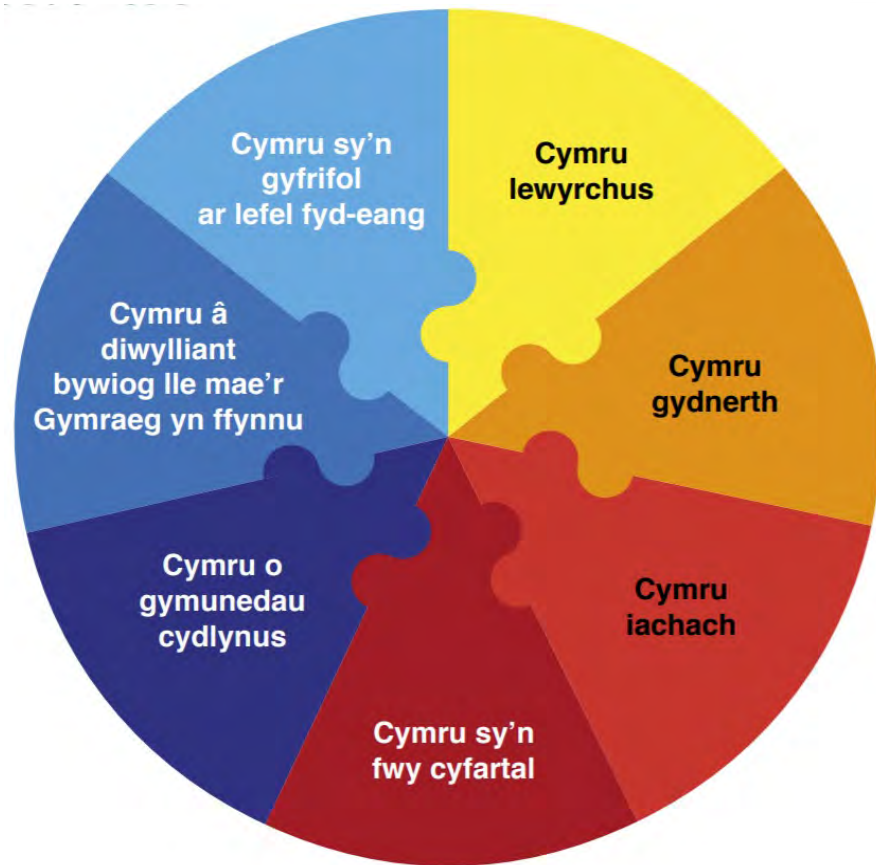


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# The Well-being of Future Generations Act

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**Integreiddio**  
**Integration**



**Cydweithio**  
**Collaboration**



**Hirdymor**  
**Long term**



**Ymgyfraniad**  
**Involvement**



**Atal**  
**Prevention**



# Mobile health in 2024



## 1. Contact lenses

A microscopic camera in the lens takes pictures of the **retina** and matches these to past cases, identifying early symptoms of **diabetic retinopathy**

**Fact**  
1% of global blindness can be attributed to diabetes. Approximately 4,200 people in England are blind due to diabetic retinopathy

## 2. Fridge

The fridge monitors the **digestive system**: drinks consumed (thirst); vitamin consumption (**deficiencies**); calories/sugar consumption (insulin levels)

**Fact**  
Diabetes is set to cost the NHS £16.9 billion by 2035/6

## 3. Artificial pancreas

Mini artificial **pancreas** to detect irregular **blood sugar** levels and injects insulin when necessary

**Fact**  
Worldwide in 2013, 382 million people had diabetes; by 2035 this is projected to rise to 592 million

## 4. Clothes

**Smart fibres** in all clothes sense a rash or skin condition appearing, signalling the possible onset of diseases such as **skin cancer**

**Fact**  
There are currently almost 13,000 new cases of skin cancer diagnosed each year in the UK

## 5. Thermometer patch

An electronic stick-on "tattoo", half the width of a human hair in size that detects precise **temperature changes** around the area of skin where it is placed, tracking **heat flow** through the bloodstream. This indicates **cardiovascular activity**

**Fact**  
The number of people who die from cardiovascular diseases, mainly from heart disease and stroke, will increase to 23.3 million by 2030

## 6. Shoes and socks

Shoes and socks track movement of **feet**, detect when you are too sedentary and update you on **fitness goals**, as well as monitoring your **weight**

**Fact**  
Physical inactivity costs the NHS £900 million annually

## 7. Nappies

Smart nappies monitor children's **sleeping patterns** and **body temperature** for symptoms of illness such as **dehydration**

**Fact**  
Approximately 440,000 children around the world have diabetes with 70,000 new cases diagnosed each year

## 8. Toilet

The smart toilet monitors the **liver** and **kidney** by measuring the frequency and amount of urine passed, analysing for **glucose levels**, **dehydration**, **infection** and kidney problems. It also alerts for high **blood pressure**, a symptom of heart disease

**Fact**  
Coronary Heart Disease is the UK's biggest killer with 82,000 deaths annually. Globally, more people die from cardiovascular disease than any other cause

## 9. Monitoring

Continuous **data collection** and instant **reporting** of fitness mean that prevention of disease can be **incentivised** with rewards for positive behaviour - the "gamification" of healthcare, driving **positive behaviour change**

**Fact**  
Obesity could cost the NHS £9.7 billion more by 2050



[www.bupa.com/mhealth](http://www.bupa.com/mhealth)



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1: Diabetes in the UK 2012; Diabetes UK, 2: Study in the journal 'Diabetic Medicine', Diabetes UK website, 3: International Diabetes Federation, 4: NHS Online, 5: Global atlas on cardiovascular disease prevention and control, World Health Organization, 2011, 6: British Heart Foundation, 'Physical Activity Statistics 2012', 7: The International Diabetes Federation, 8: NHS online, 9: Assessing the costs to the NHS associated with alcohol and obesity in Wales; Welsh Assembly Government Social Research, 2011

### A globally responsible Wales

- Energy for stations and the overhead wires will come from 100% zero carbon energy, with at least 50% sourced in Wales
- Supporting sustainable, socio-economic development through our procurement approach
- Develop 1500 additional park and ride spaces across Wales to encourage rail travel
- Investing £738m to electrify the Central Metro network

### A prosperous Wales

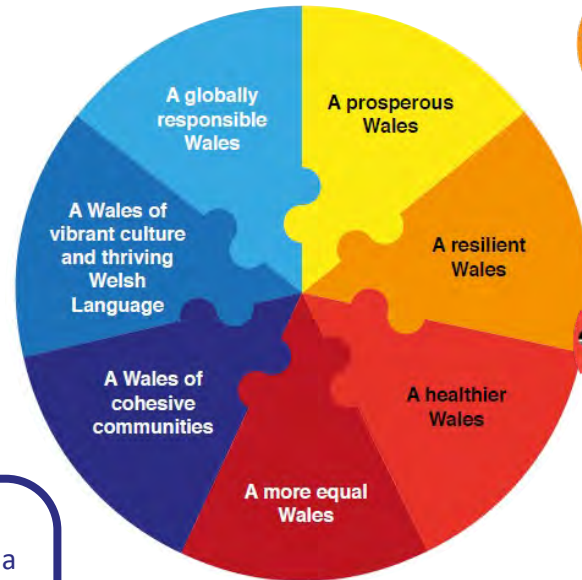
- Create 600 new jobs, investing in 30 apprenticeships every year
- Moving the Keolis UK headquarters and Global Rail Division to Wales
- Building a new Amey design office in Wales
- 95% of journeys will be made on brand new trains
- We will increase capacity by 65%
- We will create a true 7-day railway with new Sunday and Bank Holiday services

### Wales of vibrant culture and thriving Welsh language

- Promoting the continued revival of the Welsh language through bilingual customer information, a contact centre and supporting the National Eisteddfod
- Fund all staff who want to learn Welsh and support them to learn
- Providing access to Wales' vibrant culture and natural heritage working with Visit Wales to develop a new rail and tourism strategy

### Wales of cohesive communities

- Employing Customer and Community Ambassadors to encourage a greater sense of community around the rail network
- Improve business opportunities for local SME's/TSE's based in Wales
- Doubling the number of Community Rail Partnerships, with 90% of stations to be adopted



### A resilient Wales

- Encouraging use of public transport e.g. via integrated journey planning tools promoting onward travel and off-peak/advanced fares
- More than 50% of new trains will be assembled in Wales
- Investing £194m in building new and upgrading existing stations

### A healthier Wales

- Promoting active travel, new cycle storage and safe, well-lit walking routes to encourage people to make healthier choices
- Community Ambassadors working with local communities, encouraging and training people to use the rail network
- Mental health awareness training for all staff

### A more equal Wales

- Developing a new fares structure to ensure price is not a barrier to using the network
- Become an accredited Living Wage employer by 2021 to be cascaded through our supply chain
- During off-peak, cheaper fares will be introduced including, under 16s being able to travel free with a paying adult, and the age limit for half fares will be increased from 16 to 18 across Wales
- Close working with Disability groups to improve accessibility and set up a new accessibility panel for ongoing input



User experience

Design





**Diolch**  
**Thank you**

