Agenda

TL TECH

12 NOON

Arrival, grab lunch and take seats

12:15 PM

Energy saving tips with Home Energy Scotland

12:40 PM

Smart home solutions for a sustainabie future

1:00 PM

Questions and open discussion

1:15 PM

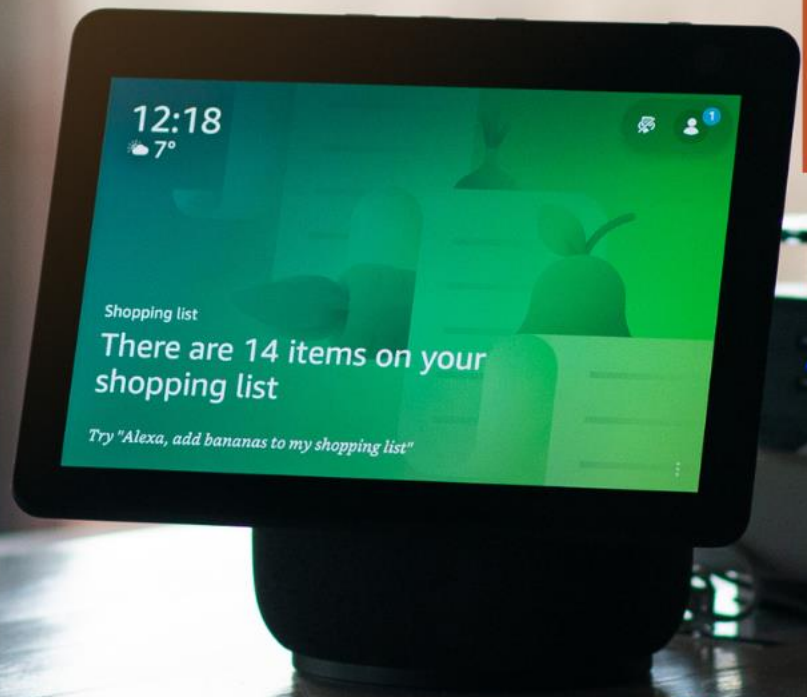
Opportunity to interact with the demo devices

HOME ENERGY SCOTLAND

www.tltechsmart.com

Smart Home Solutions for a Sustainable Future

HOME ENERGY SCOTLAND



7th December
@ONE Tech Hub

TL TECH

www.tltechsmart.com

TL TECH

Who are TL Tech?

We're a family company based in the North East covering Scotland-wide. Our expertise includes smart home design/installation/maintenance, building Alexa voice solutions, project management and supporting academic innovation

Smart home and Internet of Things (IoT) technologies are revolutionising the way we approach managing our homes, providing new opportunities for accessible, convenient ways to conserve energy and minimise our carbon footprints.
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What are the environmental benefits of smart home technologies?

- Increases understanding of energy consumption
- Allows automation to reduce energy consumption
- Facilitates optimisation of energy generation with renewables
- Helps to understand use of other resources such as water

Use Cases: Smart Heating

- Adjust home temperatures when away to save heating/cooling costs
- Air quality monitoring to ensure humidity isn't too high and ventilation is sufficient
- Closing window coverings to provide shade in summer and help keep the heat in at night
- Integrate with weather forecasts to optimise efficiency

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Use Cases: Smart Lighting

- Automate lights to turn on/off based on schedules, light levels, sunrise/set times and occupancy
- Choose energy-efficient LED bulbs
- Maximise natural light with automatic window covering opening
- Consider using LED task lighting

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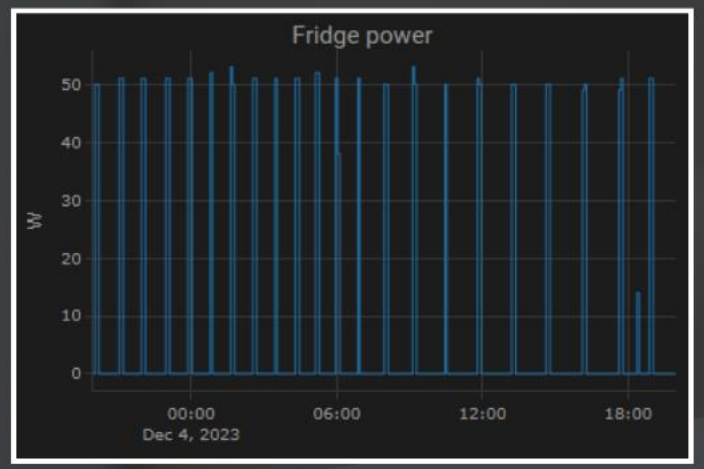
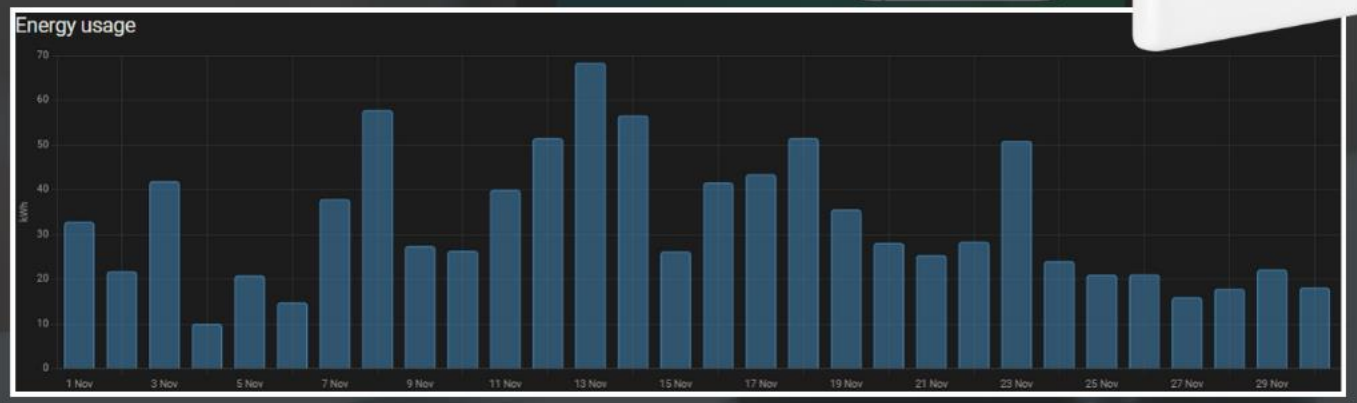
Use Cases: Smart Appliances

- Monitor energy usage
- Switch off appliances instead of being on standby
- Optimise laundry and dishwasher cycles to run during off-peak hours





Use Cases: Renewable Energy

- Integration with solar panels, wind, heat pumps, etc to optimise flow of electricity to power the home and feed into the grid
- Integration with electric vehicles to track charging and optimise use of green energy
- Know when electricity is being produced by renewable energy and plan to use large appliances then

nationalgridESO

Carbon Intensity API

National Grid ESO, in partnership with Environmental Defense Fund Europe, University of Oxford Department of Computer Science and WWF, have developed a Carbon Intensity forecast for the GB electricity system, with weather data provided by the Met Office.

carbonintensity.org.uk /

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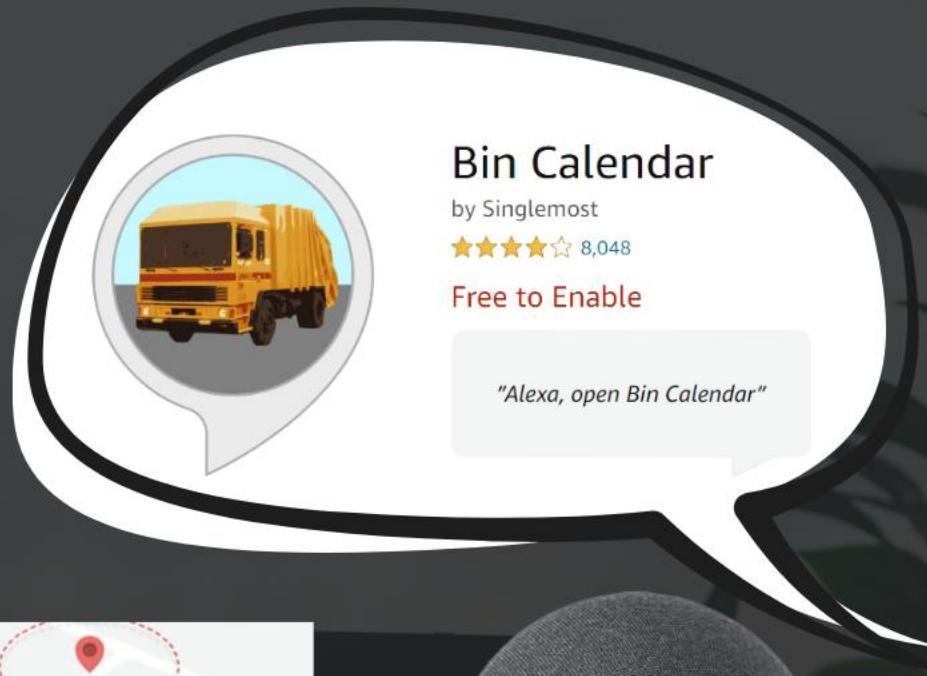
Use Cases: Other

- Water savings from leak detection and responsible usage tracking
- Bin calendar voice app
- Geofencing, linking to your location so your house “knows where you are” and can automate heating and lighting



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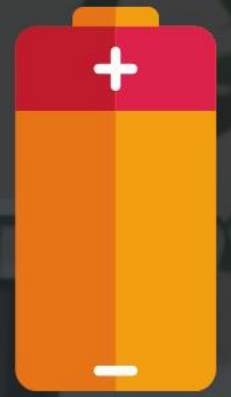
Data Management

- Ensure smart devices only transmit necessary data to reduce energy usage, also helps to preserve battery life.
- Consider what data that you want to retain and where this data will be stored, i.e. locally or in the cloud.



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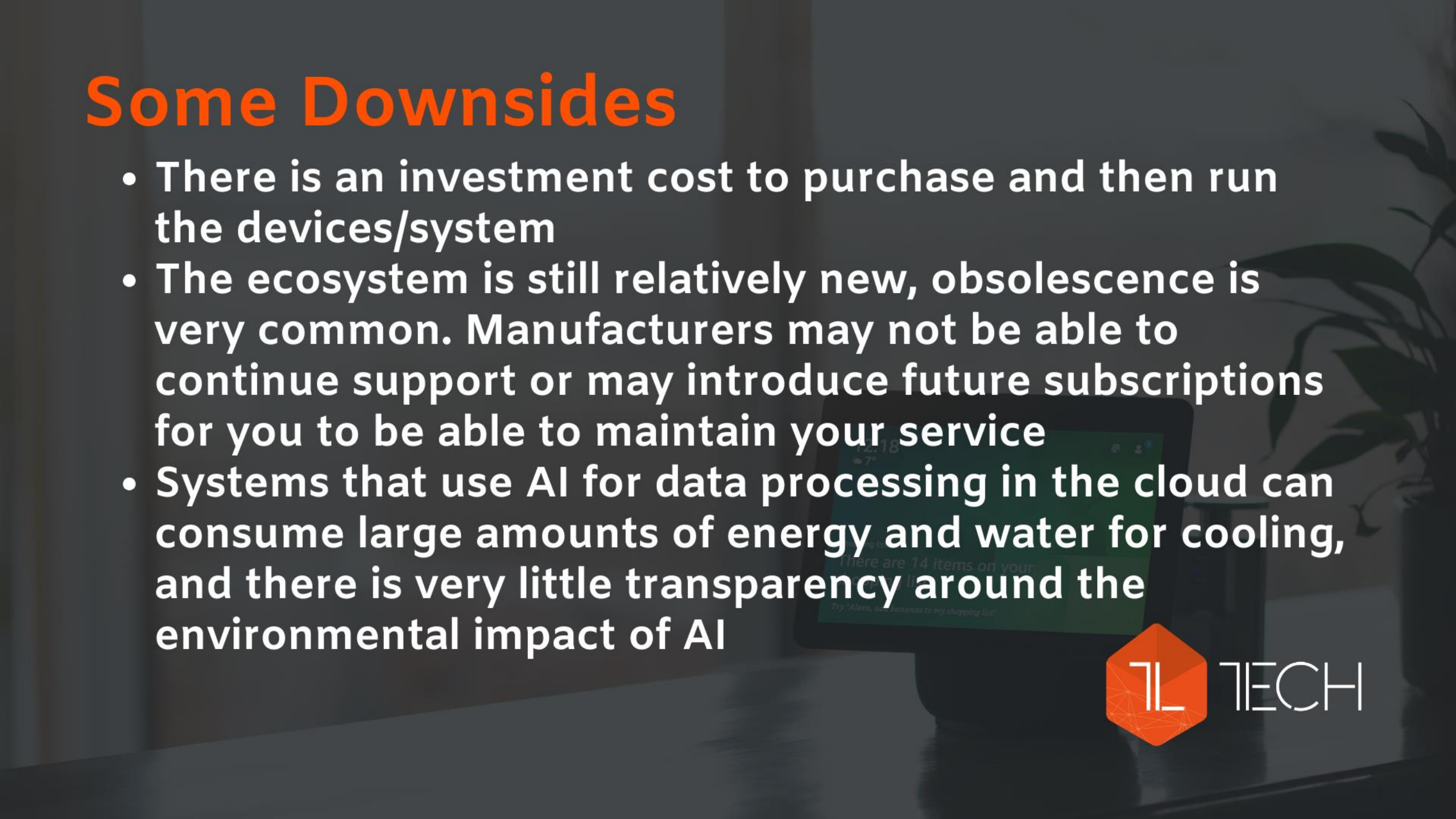
Some Downsides

- There is an investment cost to purchase and then run the devices/system
- The ecosystem is still relatively new, obsolescence is very common. Manufacturers may not be able to continue support or may introduce future subscriptions for you to be able to maintain your service
- Systems that use AI for data processing in the cloud can consume large amounts of energy and water for cooling, and there is very little transparency around the environmental impact of AI



Our top advice to help you get started utilising smart home technologies to reduce your environmental impact

Prioritise investment in energy efficiency measures like insulation and draft proofing over fancy tech

Start small - practical use cases can be a great hook/intro

Prioritise privacy, data and ethical aspects

Make sure to dispose of your e-waste responsibly

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