Welcome to SIE’s Museum of the Future!

What is it?
SIE’s Museum of the Future showcases a series of artefacts of the future that captures the future forecasts of students studying at Scotland’s Universities and their insights about a future they want to make happen. Representing a diverse range of disciplines and level of study, these students took part in the Scottish Innovative Student Awards (SISA) for 2018/2019 and received the top Level 3 award, Innovation Champion.

How was the collection generated?
Each student receiving this award arrived at their future forecasts and insights by choosing a sector of society they were interested in. Their next step was to identify the big drivers or forces of change shaping this sector into something new. The students also looked at the connections between the different drivers.

They then went on to identify signals or small present-day innovations that prompted them to think about the potential impacts resulting from these drivers were they to scale up and gather momentum. Could this have the potential to disrupt the status quo in their chosen sector? To answer these questions, the students treated their signals as small building blocks of evidence of futures in the making.

How the collection has been curated
Just as an artefact of the past can tell us how people lived, an artefact of the future can tell us how people will live in the future. By making the future tangible by creating artefacts of the future we can take steps to action it in the present.

“No one can predict the future but you can think about it systematically and turn uncertainty into inspiration, creativity and resilience.”
Bob Johansen, Get there Early

This collection of artefacts of the future takes the students’ emerging insights and ideas about a possible future and, with the help of a graphic artist:

- **Transforms** them into seemingly real objects and spaces that say ‘This is how the future looks and feels’
- **Shows** how familiar objects could evolve as a consequence of changes we can foresee today
- **Communicates** the students’ findings to inspire better insights about the futures they want to make happen and inspire and inform present day action.

How to engage with the collection
Use the tangible objects and spaces you see in the collection to generate your own insights around the future possibilities for the sectors represented. Does one sector’s future landscape impact on another? Can you spot opportunities and risks for yourself and others? What action do you need to take in the present to turn these forecasts into a future you want to see or make happen?

This collection is supported by:
Angus is a typical example of the increasing use of AI or robots in the workplace and here we see three examples of collaborative working practices that are becoming mainstream.

1. Angus has generated a smart contract for a client thereby saving his human working colleague the task of searching through style examples, legal precedents and cases to produce the best possible contract.

As more and more contracts are generated, and more and more data is produced and analysed, Angus becomes smarter. His human colleague had to make sense of the task the client wanted the smart contract to do and communicated this desired outcome to Angus.

With the contract now generated, he has the task of explaining the contract’s content and its implications for the client. He has placed his trust in Angus to do the right thing based on his clear human based instructions and now he must pass his feelings of trust onto the client.

2. Angus has got to know his work colleague well, the types of tasks they have to do and their browser histories around these tasks. He collects, curates and disseminates videos and articles to this colleague in the form of bite sized personalised online learning that ensures his colleague is continually learning at any time and in any place.

3. By generating and booking all the sales appointments for a work colleague, Angus has created time for this colleague to join a team working on an exciting innovative project to design a new product that could generate more revenue for the company.
These artefacts are excellent examples of how the government’s agenda on product stewardship is working in practice. It is working towards ensuring through legislation and educational campaigns that everyone involved in the design, production, selling, use and disposal of a product has responsibility for minimising that product’s impact on the environment.

**Artefact A: The Ethical Code of Practice**

Companies are complying with a strict ethical code of practice around their manufacturing and procurement upstream processes. There have been examples of company share prices dropping if they fail their bi-annual code compliance inspection. The initial action needed by these companies to comply with the code when it came into force incurred significant costs. However, it is now generating a return on investment for some companies as shoppers choose to shop in person or online only with companies that comply with the code, even if this means the products are more expensive.

**Artefact B: Saturday Make do and Mend Clubs**

A great example of a simple idea that addresses product disposal now that people are prohibited from sending discarded clothing to landfill.

**Artefact C: Smart Clothing**

New technology continues to redefine the very clothes we wear. Gone are the days of single purpose clothing. Tomorrow’s garments will instead offer unparalleled functionality and as this example demonstrates will be capable of monitoring user wellbeing and broadcasting this data in real time to medical services.
The Future of Health
Developed in collaboration with Scottish Innovative Student Award Level 3 Innovation Champions

Artefact A: Smart Clothing

E-health is mainstream as the public opt to buy their own digital devices and customise them. With the number of elderly people staying in their own homes at a record high, these devices are especially popular for people with the responsibility for looking after elderly relatives. They get peace of mind from knowing that these devices are connected to the health care system via a GP and the emergency services.

GPAs are embracing the new technology as they have been able to reduce their number of house visits and appointments. These devices generate lots of data about the wearer and get smarter over time so health professionals have every confidence in them to detect changes in body functions. However, the medical council and several charities recently raised concerns that these devices are solving one problem but exacerbating the problem of loneliness amongst the elderly thereby creating other health problems.

Artefact B: Smart Products

Here we see a collection of everyday objects connected to the IOT by mobile technology and sensors that monitor the health and movement of people who need assistance to live an independent life in their own home. These objects can be connected to a group of designated careers. The fridge you see here can sense when the shelves are empty or if food is not being taken out and eaten, and will send an alert message.

As the price of this type of technology comes down we are seeing more and more household objects performing dual functions and large manufacturers developing these objects for the general market not just expensive niches.
The Future of Retail

Shoppers can browse a number of online virtual reality shopping stores using special glasses offered free by some of the big retail companies. At their disposal is a personal avatar who can direct them towards new items just in or who can suggest purchases based on the customer’s stored and shared personal information. This information can include, body shape and measurements, favourite colour, hobbies and interests and even the customer’s disposable income. An added feature is that the avatar can be programmed by the customer to set a spending budget.

The logistics of supplying goods and services to retail markets is collaborative and streamlined. A number of different companies have signed up to a cloud based piggy backing scheme that allows them to find and book space in each other’s delivery vessels and vehicles. These modes of transport are all connected to each other by the IOT and can talk to each other in order to schedule collections, and drop off dates and locations for their captains, pilots and drivers. This expanded and streamlined fleet has removed unnecessary vehicles and vessels from the skies, roads and waterways, and reduced carbon emissions and other forms of pollution.

Artefact A: Smart Transport Systems

Artefact B: Online Shopping is Up Close and Personal

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Travellers to a city are encouraged and motivated to reduce their carbon footprint in that city by earning City Points. For example, they earn points for taking the train to the city rather than flying or driving to it and points for taking the tram or bus from the airport to the city centre rather than using a taxi. Points can also be earned if they walk to an attraction rather than take a taxi or bus, with the App linking to their smart watches. They can also earn points by opting out of having their hotel rooms cleaned every day.

Hotels taking part in this initiative donate the money this saves to local causes. These points can be exchanged for discounts at designated restaurants and attractions. The points are valid for one year and can be transferred to other family members thinking of visiting the city.

Artefact A: Earn City Points

Artefact B: Holiday like a Local

Travellers design their unique holiday experiences before they leave home using specialised websites that connects them with the local people by way of short video clips that a dedicated website management team curates and updates on a regular basis. These videos showcase local events, people, festivals and community groups that travellers may want to engage with during their stay.

This not only enables them to avoid some of the more organised tourist sites but allows them to contribute something to the place they are visiting. For example, a traveller may sign up for a scheduled beach clean-up during their stay or attend an amateur theatre production in the suburbs of a city.
Food growers and producers are under considerable pressure to consider climate change and the impact they have on the environment. At the same time, they must balance these concerns with demands for increased crop yield and food production levels to feed a rapidly growing population. As we can see with this artefact, many are turning to the natural environment and borrowing ideas from biology to generate solutions rather than using chemicals and pesticides.

From the customer’s perspective, they are better informed about food production methods through social media channels with a global reach. They do their bit for the planet by buying their food from companies with transparent and eco-friendly supply chains. The customer uses an App that tells them which companies adopt good practices and those that don’t. Sustainable production methods are key to a company’s competitive advantage.

This artefact represents today’s modern family committed to doing their bit for climate change by producing some of their food on their own doorstep using common place urban farming methods.

Their smart home assistant helps ensure that they use what they grow and the children are learning where food comes from, and its nutritional benefits. The family are connected to similar home growers through their smart devices so home produce can be shared or swapped in the community and nothing goes to waste.
Thank You!

To our SISA Innovation Champions:

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We’d love to hear what you thought -- share your feedback below: