

DAVIDSON, A. and BREMNER, P. 2020. *Innovative teaching practices in developing enterprising, ethical and work ready graduates*. Presented at the Online festival of learning, teaching and student experience (LTSE 2020), 14-18 September 2020, virtual conference.

# Innovative teaching practices in developing enterprising, ethical and work ready graduates.

DAVIDSON, A. and BREMNER, P.

2020

Online Festival of Learning Teaching Student Experience

# Innovative Teaching Practices in Developing, Enterprising, Ethical and Work Ready graduates

Ann Davidson, Enterprise Programme Director, Scottish Institute for  
Enterprise

Dr Pauline Bremner, Teaching Excellence Fellow, Robert Gordon University



# Outline

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- Whole person education
- SISA methodology
- Museum of the Future



# Whole person education

4.0

Whole person education and the development of graduate skills has increasing importance in the academic debate.

Holistic Curricula  
Lifelong learning – CPD  
Collaborative practices





# Industry – whole person

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...ce, some skills are more equal than others.

# Top 10 skills

## in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

## in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity

CPD



Source: Future of Jobs



# SISA Scottish Innovative Student Awards



# The Power of Imagining the Future

*“Stories of the future have the power to liberate us from the tyranny of what was and what is.”*

**Mashir Hamid**



# Vision not Victim Project

## Taking them out of the reality of the moment



*I love planes. Even before I had ever been on a plane, I knew I wanted to be a pilot, I knew deep down this is what I wanted to do. I finished my studies and found a way to get to flight school. Now, not only do I get to live my dream, but I also help people travel, to see the world and discover new places.*

# Experiencing their future



*In this image it is early morning and I am waiting in my classroom for my students to arrive. I teach younger children to read and write Arabic. I am a very compassionate and kind person, and so a perfect teacher. I am strict, but I go out of my way to gently help those students who are having difficulties.*

# The Power of Imagining the Future

The reality of the moment is so palpable and powerful that it holds imagination in a tight orbit from which it never escapes.

D Gilbert



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**SPECULATIVE**



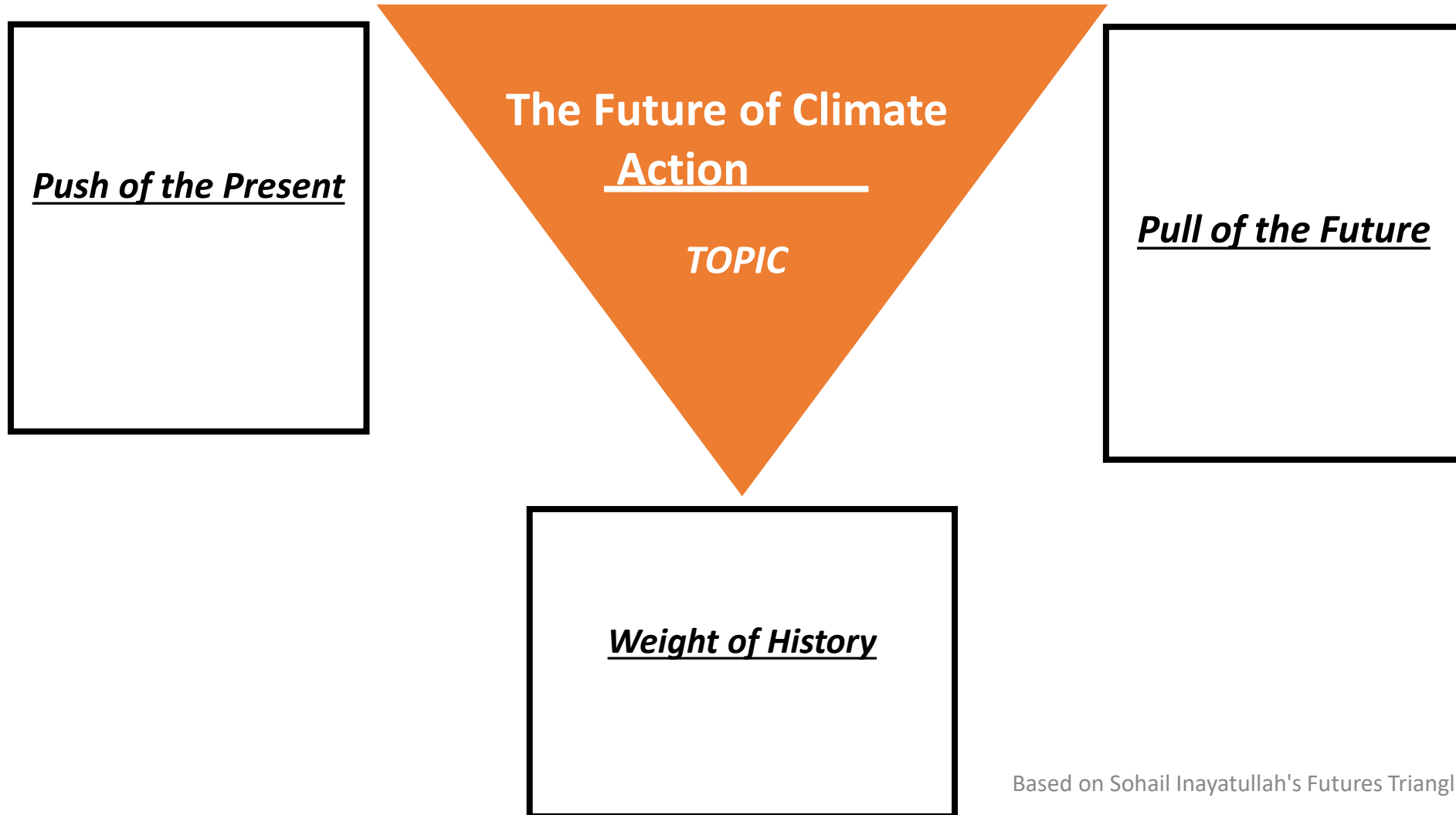
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**EXPERIENTIAL**

# The Future is Urgent



# How Change Happens to Create the Future





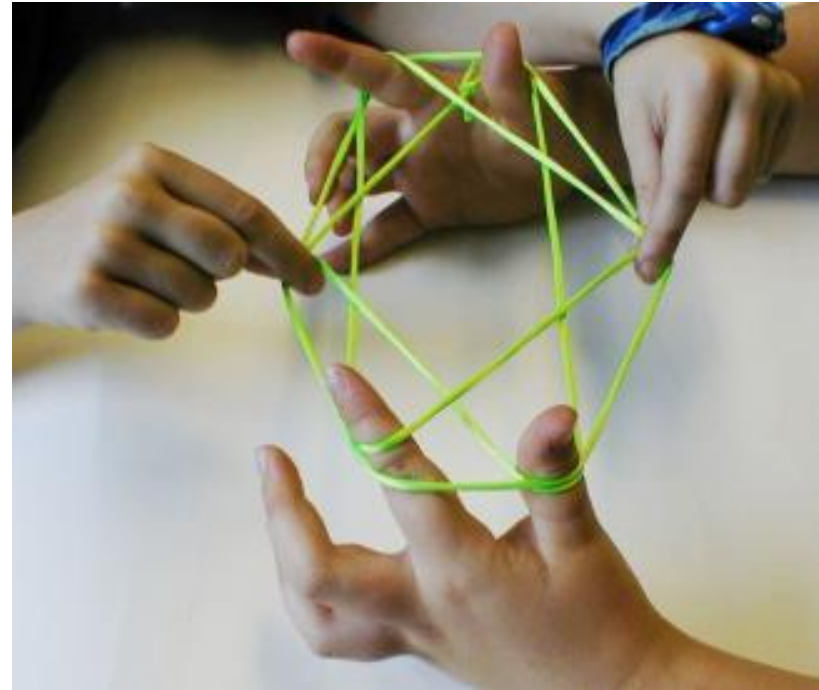
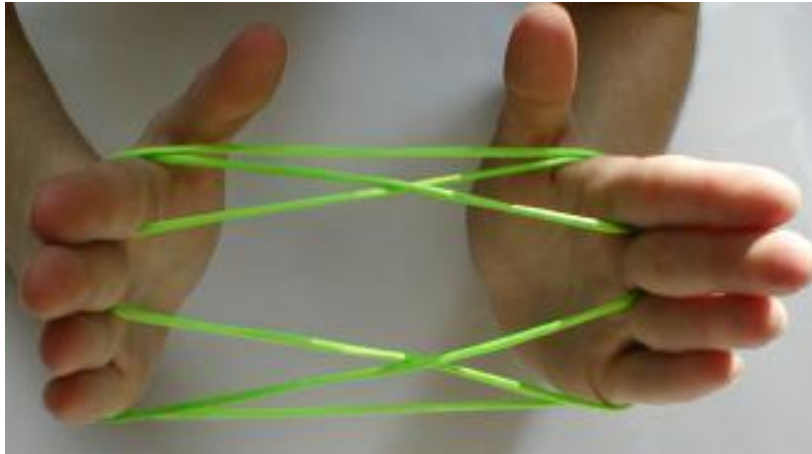
# An Example of a Signal



# The New School Fees.



The Three Dimensions are Connected  
and how they Push and Pull Against  
Each Other Creates New Shapes (of  
the future).



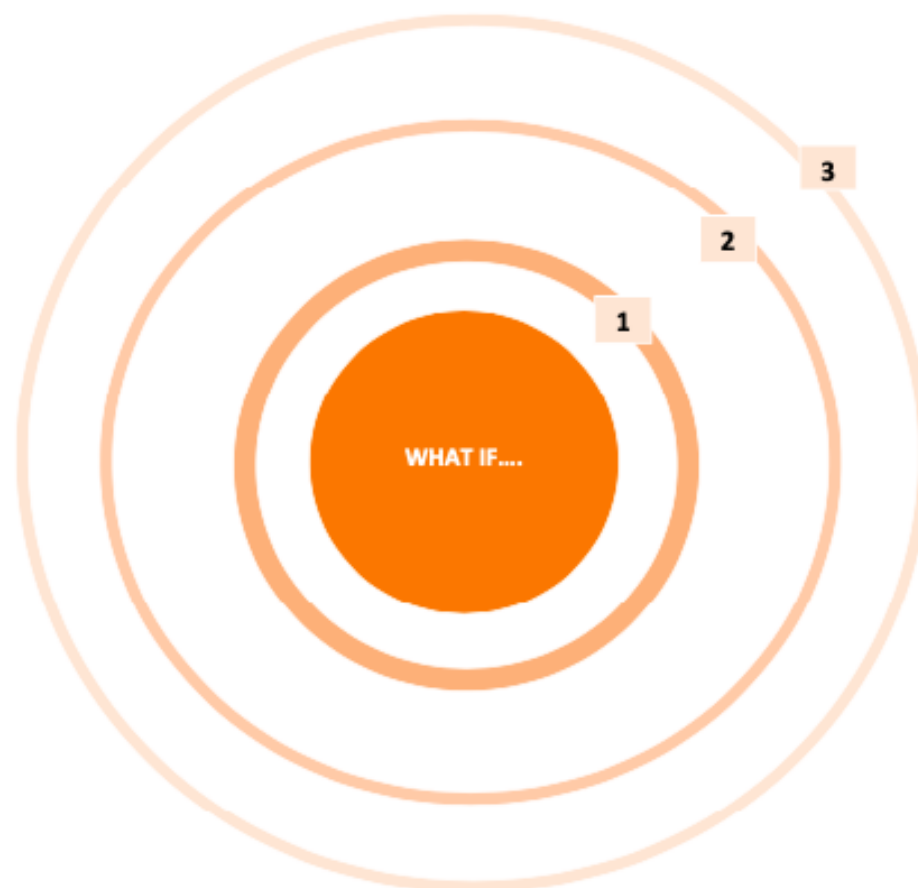
## BUILDING A FUTURE WORLD

This worksheet is designed to help you take the forces of change you have identified around your chosen topic and use these to begin the process of building a well thought out future world in which you will explore the issues existing in this new world and the innovations needed.

**STEP 1:** Select a force for change that you think will impact on your chosen topic and then use this force to generate a short sentence that describes a future world that this force could generate.

**What if** ..... **in 5 years' time?**

*The next step is to use this question as a platform to build a plausible future world.*



### HOW IT WORKS

**Circle 1.** Pull out the direct implications from this statement.

**Circle 2.** Now pull out how these implications might connect with and impact on another area of society or industry sector.

**Circle 3.** Finally, pull out some less obvious implications that are further removed from the initial question.

### STEP 2: BUILDING YOUR WORLD

*Describe what this world looks like in a couple of sentences. What products, services and job roles will exist in this world?*

*This is a world in which....*

### STEP 3: OPPORTUNITIES, RISKS AND ISSUES

*Use this box to document the opportunities and risks you see in the world you have built. What issues are different groups of people facing in this world? What skills and competencies are needed by organisations operating in this world?*

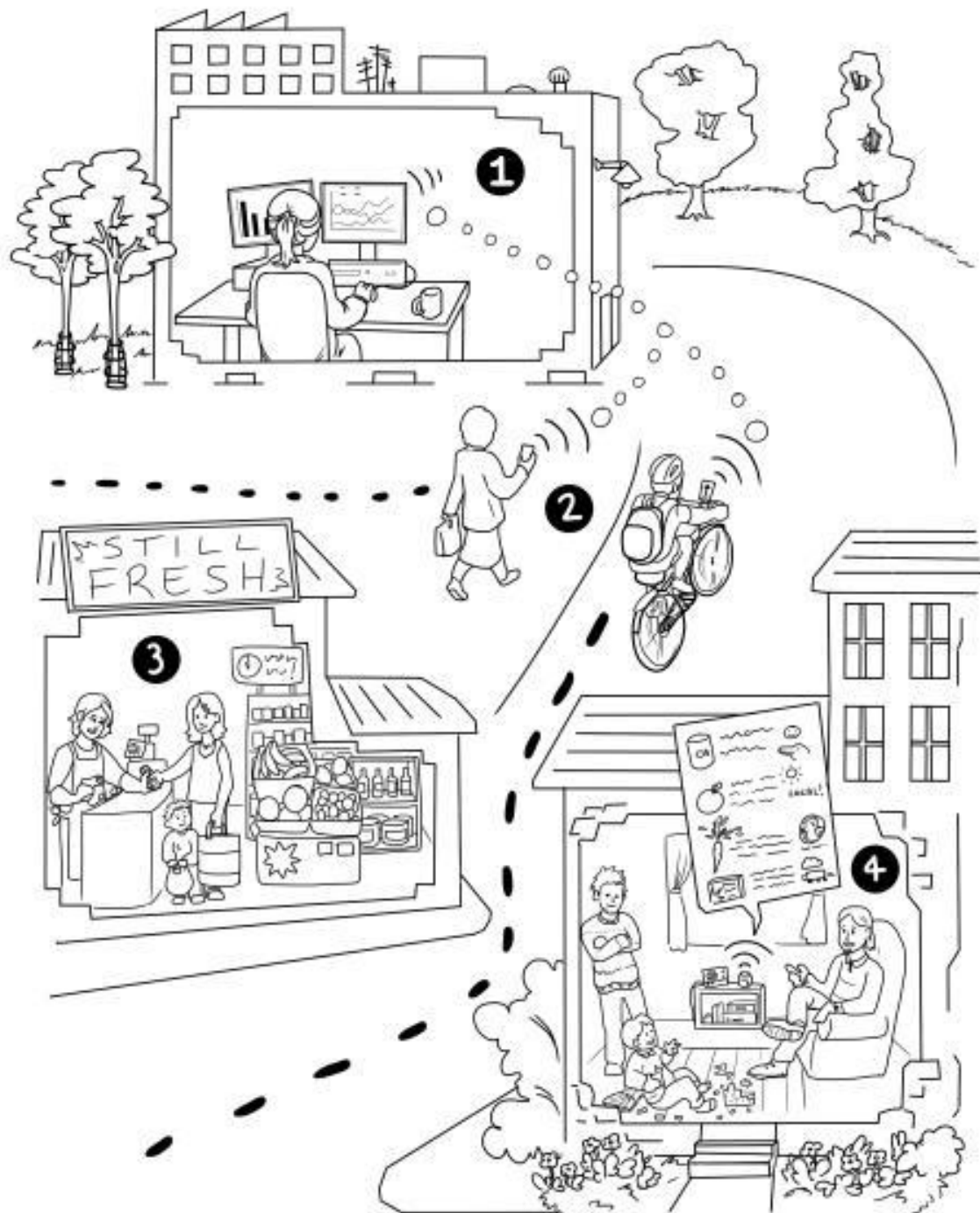


# Aims for SISA level 2 Days

- To help students experience a future they have imagined.
- Build a bridge to that future for themselves and other stakeholders.
- Use this bridge to take catalyse action in the present.







## Part of Something Bigger

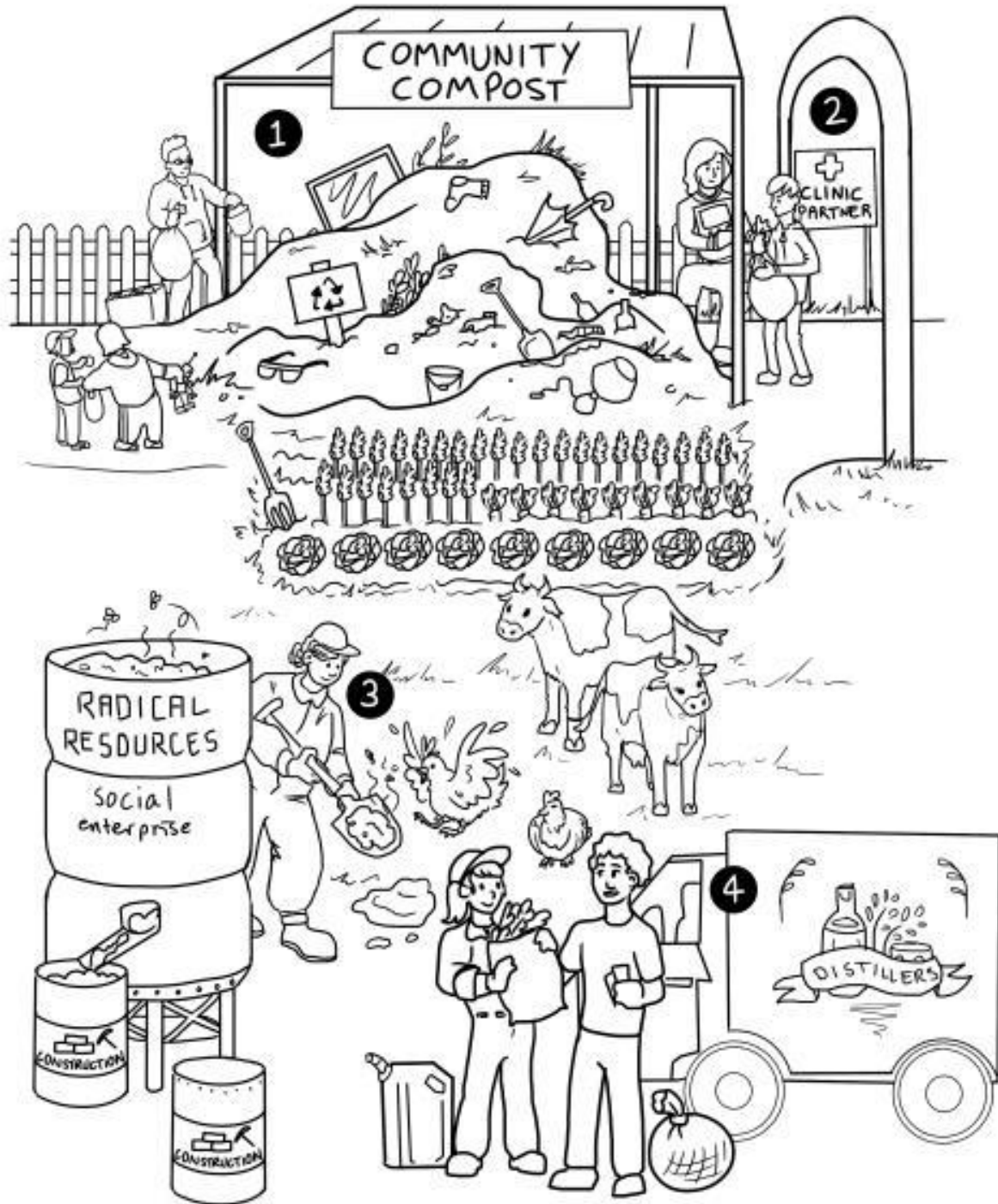
**Artefact 1.** Here we see the Human Resources Department of a private company collating the data generated by the Green Footprint APP that it provides to all its employees. This APP is provided by the City Council for a small fee to local businesses of all sizes to help their employees make the decision to walk or cycle to work and to see the impact of their efforts on city pollution levels. The company reports the impact the actions of their employees have on air quality in their annual report and financial statements in order to show that the company is playing a part in implementing the United Nation's Sustainability Goals. It is often the first set of figures their investors and potential partners look for.

**Artefact 2.** Employees of the company are motivated to walk or cycle to work on a daily basis thanks to their use of the Green Footprint App that is provided to them free of charge by the company. They like the fact that they get a weekly report on their individual impact on city air quality and they get a monthly report on the company's collective impact.

**Artefact 3.** Situated in one of the busiest commercial areas of the city is a supermarket with a difference. Still Fresh is open for people to shop on their way home from work. Laid out like a traditional express supermarket, Still Fresh has one major difference, all the food is just passed its sell by date but still considered good to eat. Shoppers get a digital receipt to their phone that tells them the impact their choice to shop there has had on carbon emissions.

**Artefact 4.** Thanks to the use of smart assistant hubs like Alexa, the family can choose items for the family weekly shop that are environmentally friendly in terms of how far they have travelled from their source, if the packaging is sustainable and if ingredients are sourced ethically.





## Virtuous Nature

**Artefact 1.** The local farm operates a community compost heap with a difference. Thanks to some unique bio organisms introduced into the heap, people can drop off items like plastic bottles and other items made from plastic that can be broken down by these organisms. The compost is then used to fertilise the farm's crops with surplus bags of compost sold to local gardeners.

**Artefact 2.** Helping to run the project is a member of the farm team who is helping out as part of a social prescription provided by his doctor. His mental health is improving greatly by being out in the fresh air and helping out with a project that helps the environment.

**Artefact 3.** The farm has a large dairy herd and the owner is aware of the impact the methane gas from dairy farming has on the ozone layer. To offset this impact the farm is part of a project that takes one of the waste materials from this type of farming – manure – and turns it into a new resource. Manure is collected for uplifting by Radical Resources, a social enterprise, which aims to take some of the world's less valuable waste products and re-purpose them into brand new and valuable resources for use across different industry sectors. In this instance, this manure will be turned into bricks for a local construction company.

**Artefact 4.** Another unusual partnership the farm has is with a local distillery that collects the chaff from the farm's barley harvest to help it manufacture its new recyclable packaging.





## Life Skills

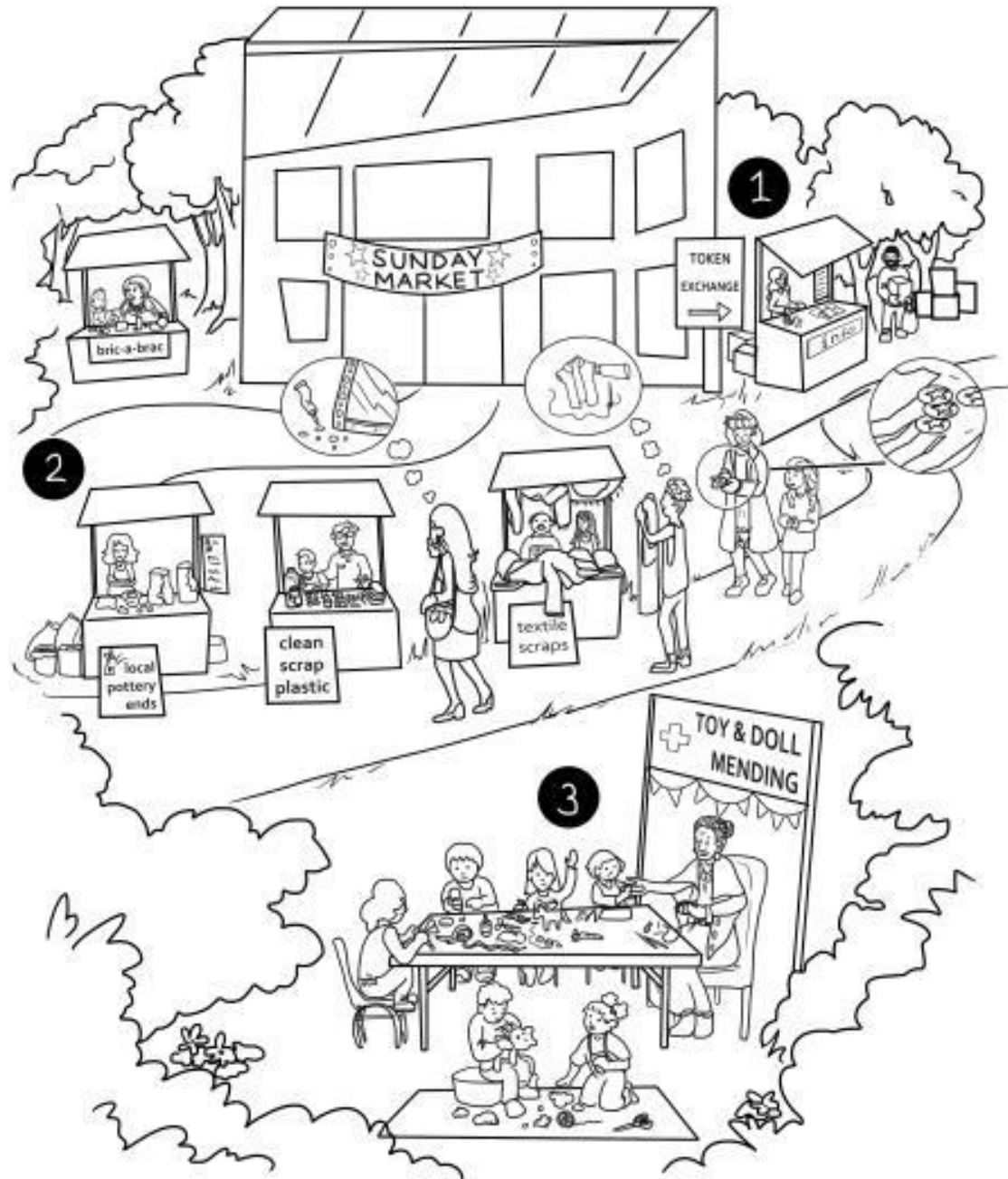
**Artefact 1.** At the local school students are given life skilling classes in how to do their bit to protect the environment. These skills are seen as just as important for a student's development as life skill classes on sex education and managing money.

**Artefact 2.** Students are asked to bring 10- 15 items of plastic waste to school a week. The school has its own 3D printer and some of this waste is used to manufacture items for the classroom or items for use in the playground like plastic bats and balls. Any waste that can't be used in this way is sent to a recycling centre or used to exchange for other goods and services.

**Artefact 3.** The school has its own climate victory garden and many of the lessons are based around growing fruit and vegetables and sustainability. Produce is sold to the local community and is also used in school meals. Pupils take it in turns to show members of the local community around their garden and talk to them about the benefits of using locally produced food.

**Artefact 4.** Radical Resources is a social enterprise that works to collect unwanted waste items that would normally go to landfill and to re-purpose them. In this instance we see them dropping off an old mattress that will be used to help create a seedling bed for the victory garden. The school pay Radical Resources for the mattress with the plastic waste the children bring to school.

**Artefact 5.** The garden takes a lot of work and staff have collaborated with a local group of retirees called the 'Silver Eco Warriors' to help with its maintenance. These eco warriors have the time to help and the desire to leave a better world for their grandchildren.



## A Common Purpose

**Artefact 1.** At this Sunday Zero Waste Market members of the community get access to a 3D printer. At any time during the week they can drop off their plastic waste at the community centre and in return they get tokens that they can then trade in at the Sunday market for use of the printer to generate items like a bench for their garden, home gym weights, or kitchen items.

**Artefact 2.** A popular part of the market are the stalls selling actual waste. Visitors can expect to find items for sale like plastic bottles and packaging, textiles that can't go to the local charity shop and empty foil medicine packets. These stalls are popular with the local creative community who are always on the lookout for new and sustainable resources with which to make their products.

**Artefact 3.** One of the key purposes of this Sunday Market is to engage with the younger members of the community to help educate them about the environment and how to re-purpose, mend and swap their toys. The founders believe that this initiative helps children to grow up to be responsible consumers. A group of designers work with the children and their parents to turn broken toys into something new and desirable. They also hope to spot the eco- designers of the future.





## New Perceptions and Responsibilities

**Artefact 1.** A fashion company is meeting with its design team to discuss the collection for next season. It has a good track record in sourcing suppliers that can provide recycled material and ensuring that the garment manufacturers use sustainable processes and pay their staff a good wage. However, it wants to take its green credentials a step further by factoring consumer disposal habits into the lifespan of its garments.

**Artefact 2.** To enhance its green credentials, the company has developed an APP for use by its customers. Once the APP is downloaded to the customer's phone they just have to point their phone at a garment's clothes tag in store and they will receive information to their phone on the green credentials of that garment. The APP also provides information on how that garment can be recycled.

**Artefact 3.** The company has a number of brick and mortar stores and to increase footfall it offers customers the chance to bring items into the shop for recycling. Customers can bring in unwanted garments from the company as well as items from other selected brands. Customers are rewarded with tokens that they can spend only in the company's chain of stores.

**Artefact 4.** Once a month the company offers for sale in its stores a premium collection of clothing made from repurposed material. For example, plastic collected from the oceans. This collection attracts a premium price and sells out in hours as consumers perceive it as having a high value in terms of both design and its impact on the environment.



## Home Based Eco Warriors

**Artefact 1.** It's Saturday morning and the family has the opportunity to get in the car and head out of town to a big shopping centre or spend 5 minutes walking to their local high street to shop there. They want to be sure that they can get everything they need on the high street so they log on and use an APP that allows them to browse the inventories of the local shops in the same way they would browse the inventory of Amazon. They can also reserve items. Confident that they will find what they want locally, they decide to head for their local high street.

**Artefact 2.** Each stair in the home is fitted with pads that collect the kinetic energy from footfall on the stairs. This energy is used to power small household items like computers and hairdryers.

**Artefact 3.** Jo is learning about environmental responsibility in school, but still struggles with making sense of the recycling information on packaging and what can be disposed of in the different bins provided by the local council. The family now has a smart bin that reads the bar coding on empty packaging and tells them what can be deposited. The smart bin is then emptied once a week into the main on-street recycling bin for the Council to collect. It even tells them if it items can go to the local compost heap at the nearby farm.

**Artefact 4.** Household items that would in the past have gone to landfill are now re-purposed as standard procedure. Here we see the social enterprise, Radical Resources, uplifting an unwanted mattress for a small fee. This mattress is cleaned and then delivered to a local school where it will be used to create seed beds for the victory garden planted by the pupils. The school pay for the mattress with some of the plastic waste that the children bring to the school on a weekly basis. Radical Resources will also uplift unwanted sofas.



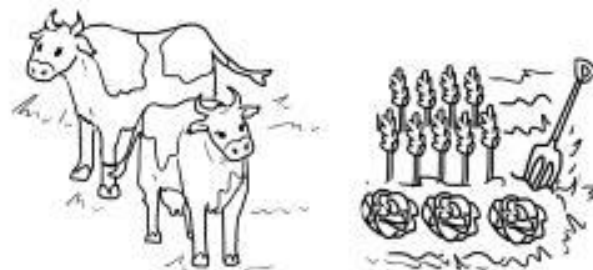
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 Alexander Herrington - Glasgow Caledonian University  
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 Rasyidah Salleh - Glasgow Caledonian University  
 Robert Greig - Glasgow Caledonian University  
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 Edward Cox - Glasgow School of Art  
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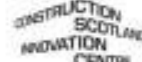
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Museum of the Future illustrations  
 provided by Lee Monroe



# Student Comments

“

"Being a fashion student and attending SISA Level 2 made me realise that I want to work for a sustainable company."

“

"I will now be a better designer. I would be able to define problem solutions systematically and strategically."



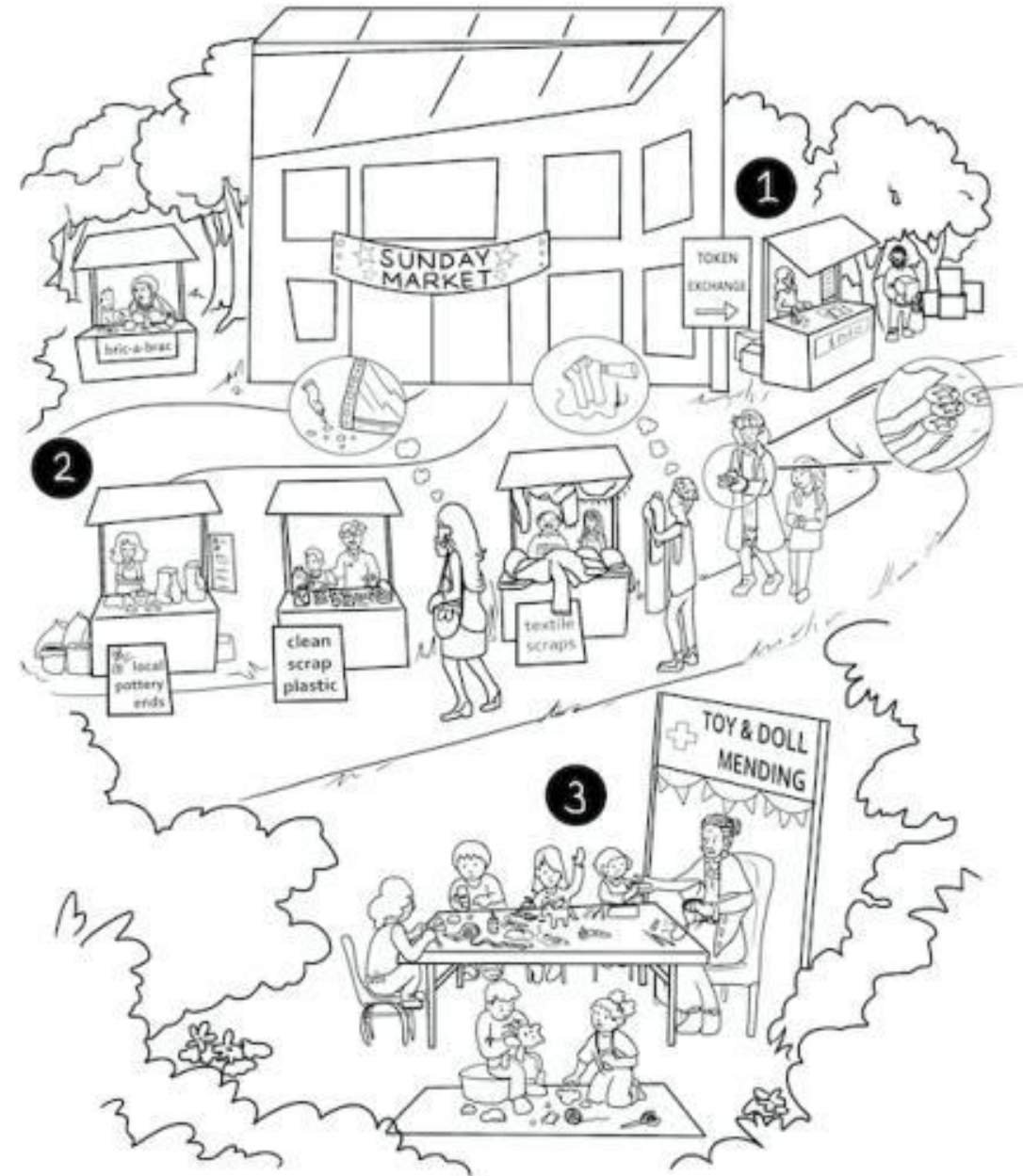
*SISA Level 2 Students Work on Catalysing Their Ideas*

“

"It will assist me in assessing the impact of future projects in the workplace in terms of economic, social & environmental sustainability."

“

"I believe the SISA Level 2 training has provided me with a framework and methodology for developing my idea and moving from general to specific solutions to specific needs pertaining to the Sustainable Development Goals."



*SISA Level 2 Students Work on Catalysing Their Ideas*

# Student Testimonials

“

“I developed my ability to devise viable projects based on innovative ideas during my SISA experience. I used this skill to devise a summer research project and to gain a scholarship for carrying the project out.”

“

“Not only did I meet some amazing people and learn things I'd otherwise have taken far longer to learn, but partaking in the SISA programme has also greatly improved my career prospects.”

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