
Towards a sustainable and resilient Singapore 2050

Singapore Futures Youth Competition 2022
6-10 June 2022

Organised by
Executive Education Singapore Futures
Lee Kuan Yew School of Public Policy



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About the Singapore Futures Youth Competition



About the Singapore Futures Youth Competition



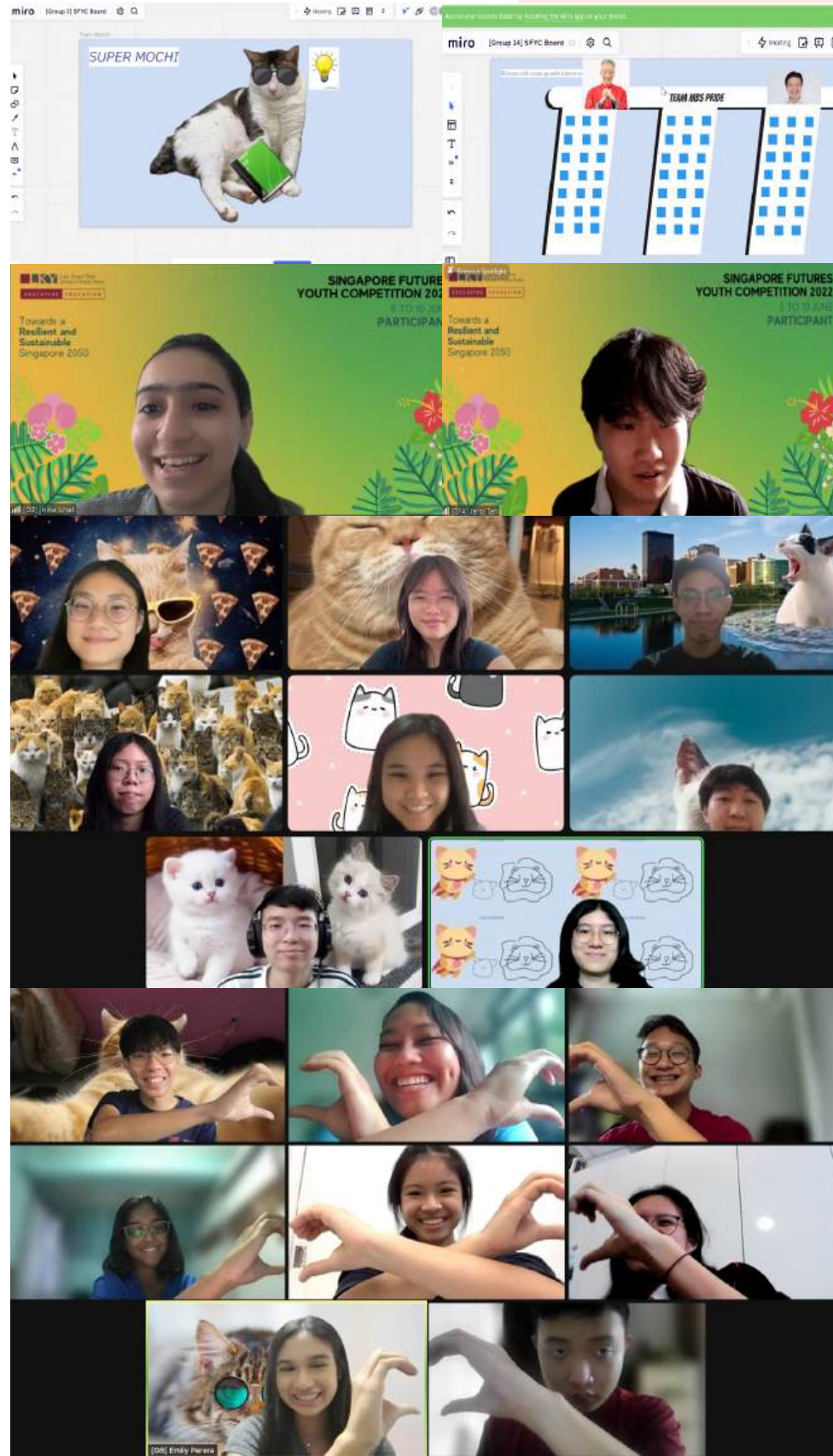
The Singapore Futures Youth Competition 2022 was the second run of the flagship youth programme by the Lee Kuan Yew School of Public Policy (LKY School) Executive Education Singapore Futures (EESF). The theme of the competition was “Towards a Sustainable and Resilient Singapore 2050” which challenged youth to imagine Singapore’s sustainable development in the future.

The competition was a 5-day online event held from 6 June to 10 June

2022. In the competition, the LKY School was delighted to host a diverse group of 100 students from a variety of pre-tertiary education institutions such as Junior Colleges, Polytechnics, Institutes of Technical Education, Madrasahs, and independent schools to participate in the event.

The competition comprised of a 3-day Futures Thinking and scenario planning workshop and 2 days of presentations and judging. During the workshop, participants were introduced to futures

thinking tools and frameworks and their application in the public policy context. The participants then applied these tools and frameworks into their group discussions, and developed scenarios for the futures they envisioned for Singapore in 2050. Their scenarios were later presented to the various judges during the preliminary and final judging rounds.



SINGAPORE FUTURES YOUTH COMPETITION 2022
 Day 1 Opening (6 June 2022)

Judging Panels



Judging Panels

Both preliminary and final rounds required participants to give a 10-minute presentation, followed by a 10-minute Q&A session by the judges. The group presentations were assessed based on the following criteria:

- believability and creativity;
- adherence to the theme/guidelines;
- presentation delivery; and
- team coordination and cohesion

We invited experts and leaders from the public and private sectors as members of judging panels.

For the preliminary rounds, we had the following as our judges:



Tiong Hui Yeo

Manager, Base-of-Pyramid (BoP), Innovation and Market Development, EssilorLuxottica



Elly Chiu

Senior Assistant Director, Research and Futures, Centre for Liveable Cities



Amy Ho

Director (Sustainability), National University of Singapore



Kenneth Poon

Foresight Analyst, Centre for Strategic Futures, Strategy Group, Prime Minister's Office



Melissa Low

Research Fellow, NUS Centre for Nature-Based Climate Solutions



Azree Rahim

Director, Strategy & Organisation Excellence, MUIS



Praveen Tekchandani

Partner, Climate Change and Sustainability Services, Ernst & Young LLP



Yi Da Soh

Vice President, Investor Relations, United Overseas Bank Limited



Yvonne Kong-Ho

Deputy Head, SMU-X, Singapore Management University



Panel Discussion with Professor Benjamin Cashore and Ms Nor Lastrina Hamid



Panel Discussion with Professor Benjamin Cashore and Ms Nor Lastrina Hamid

On the final day of the competition, we had an insightful panel discussion with Ms Nor Lastrina Hamid, the Co-Founder of Singapore Youth for Climate Action, and Professor Benjamin Cashore, Li Ka Shing Professor in Public Management and the Director of the Initiative on Environment and Sustainability at the Lee Kuan Yew School of Public Policy.

Participants had the opportunity to engage with Professor Cashore and Latrina, posing questions and concerns to them. We saw an interesting discussion about how the Singapore government divides responsibility for reducing carbon emissions amongst individuals and industries, green capitalism in Singapore, and how green technology can be used effectively to reduce emissions. Tapping into the expertise of our panellists, participants probed more into how conversations can be sparked amongst youths to put effort towards climate action, and learnt about their experiences working in sustainability efforts.

Finally, in their closing remarks, Professor Cashore and Latrina provided advice to our young participants for their journeys in building a resilient and sustainable Singapore for 2050. Professor Cashore encouraged youths to be purposeful and committed in their pursuit of improving sustainability, whilst highlighting the importance of them finding enjoyment in their journeys and experiences. He also gave participants a unique perspective of looking at sustainability, beckoning them to imagine talking to their 85-year-old selves during decision-making. Lastrina pitched in, challenging participants to imagine themselves in a future where Singapore does not exist, to broaden their ideas of what future they want to create for Singapore.



Prof Benjamin Cashore

Li Ka Shing Professor in Public Management
and Director (Initiative on Environment and Sustainability),
Lee Kuan Yew School of Public Policy



Ms Nor Lastrina Hamid

Co-founder,
Singapore Youth for Climate Action (SYCA),
Lee Kuan Yew School of Public Policy

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
PARTICIPANT

Towards a Resilient and Sustainable Singapore 2050



[G9] carmen



Lastrina

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
PARTICIPANT

Towards a Resilient and Sustainable Singapore 2050



[G9] Frodo Joshua Matthias M.



Lastrina

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
ORGANISER

Towards a Resilient and Sustainable Singapore 2050



Cheryl Chung



Benjamin William Cashore

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
ORGANISER

Towards a Resilient and Sustainable Singapore 2050



Cheryl Chung



Benjamin William Cashore

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
ORGANISER

Towards a Resilient and Sustainable Singapore 2050



[LKYSPP] Hanan Rahan

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
PARTICIPANT

Towards a Resilient and Sustainable Singapore 2050



[G12] Mathew Marchel Lim

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
PARTICIPANT

Towards a Resilient and Sustainable Singapore 2050



[G12] Constance Goh



Lastrina

SINGAPORE FUTURES YOUTH COMPETITION 2022
6 TO 10 JUNE
ORGANISER

Towards a Resilient and Sustainable Singapore 2050



Cheryl Chung



Benjamin William Cashore

Prizes and Key Takeaways



Prizes and Key Takeaways

Through this competition, we hoped that participants had a meaningful and enjoyable time to make new friends, learn from one another, and network with experts and leaders from across the sustainability industry. More importantly, we hoped that insights and experience gained in this competition would be valuable resources for the participants as they navigate their own future and their place in Singapore in 2050!

Cash prizes of \$2000, \$1500 and \$1000 were given to the Top 3 groups. Additionally, 3 groups were awarded a consolation cash prize of \$500 per group. In addition to the cash prizes, participants were also entitled other benefits including a certificate of participation, and an opportunity to join LKY School's events network.

Consolation Prize Winner
Singapore Futures Youth Competition 2022

Group 8

Team members:

Ziyue Wang	Jannathul Firdouse
Xavier Goh	Jia Min Tan
Shriya Aggarwal	Emmeline Lim
Jinhao Zhang	

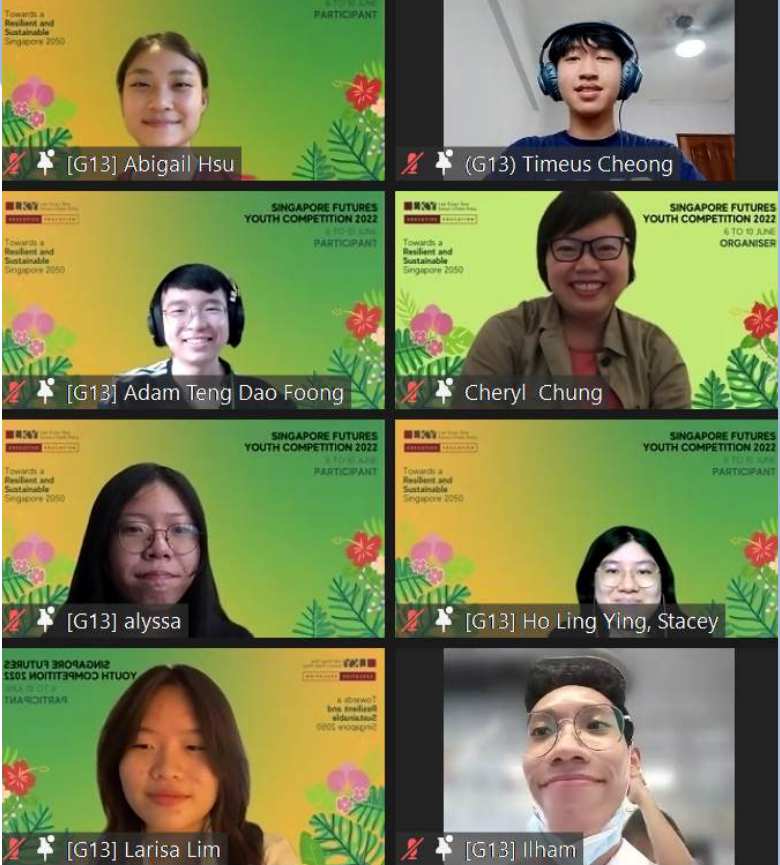


Consolation Prize Winner
Singapore Futures Youth Competition 2022

Group 13

Team members:

Adam Teng	Alyssa Cheong
Stacey Ho	Ilham Ismail
Timeus Cheong	Abigail Hsu
Larisa Lim	



Consolation Prize Winner
Singapore Futures Youth Competition 2022

Group 9

Team members:

Neo Eik Hong	Laiyla Nair
Frodo Joshua Matthias	Veverly Seet
Carmen Leong	Rayen Lim
Ngui Jia Xuan	



1st Place

Singapore Futures Youth Competition 2022

Group 1

Team members:

Jess Ong
Lionel Ong Teng Hong
Audrey Ng
Ren Gene Chew

Caitlyn Gan
Naomi Wang
Isaac Ting



2nd Place

Singapore Futures Youth Competition 2022

Group 14

Team members:

Kia Shuang Tan
Yvonne Sui Lyn
Jerry Tan

Zihao Xu
Krittika Dey
Ashley Teh



3rd Place

Singapore Futures Youth Competition 2022

Group 12

Team members:

Chia Hui Qin
Constance Goh
Ashton Koh
Arthur Ong

Yun Shan Lee
Eesha Thakar
Mathew Lim



Testimonials from Participants



Testimonials from Participants



TAN KIA SHUANG

[G14] Tan Kia Shuang

“The workshops conducted by our knowledgeable trainers were insightful and helped a lot with our team’s brainstorming process. Working with my team on the presentation, from the creative to the research and brainstorming process, was another highlight. Additionally, I am thankful to take part in this competition and emerge 2nd place on a pressing issue that I am passionate about. It really allowed me to explore sustainability and future planning in ways I never could have.

I think one of the most significant takeaways would have to be the process of brainstorming the future and the solutions needed. A focused area is needed, such that the solutions can be specific to it. When coming up with solutions, it is also essential that in reality, there will be limitations. Imagining beyond what is happening in a pragmatic manner is important in future planning and this will be something that will stick with me for life.

My favourite moment would have to be brainstorming with my group members. Throughout the 5 days, I was exposed to different points of view, which helped to broaden my outlook. This allowed me to think of the future of Singapore from various perspectives.

Also, it was delightful and fulfilling to work on the presentation as we worked on the creative vision, which was a virtual museum tour of life in 2020 Singapore and how Singapore has evolved since then. Through the 5 days, I truly acquired a wealth of knowledge not only from the trainers but also from my fellow teammates.”



FRODO JOSHUA MATTIAS M.

[G9] Frodo Joshua Matthias M.

“As a youth, I am deeply concerned with what the future holds for Singapore as this future will one day be a reality for me and my peers. Hence, I joined SFYC 2022 because it offers the unique chance to work alongside other youths who are just as passionate about thinking of sustainable plans to implement today for a brighter future and because it offered the valuable opportunity to learn from industry leaders and academic experts about futures thinking. My favourite part of the competition was definitely crafting and presenting my group’s envisioned future and the creative solutions we came up with to achieve our goals to the final judging panel. It was particularly memorable to devise interesting ways to present our ideas and solutions, including creating characters and skits that allowed us to inject our own personality and humour into the pitch.

My main takeaway from the competition is learning how to leverage the different strengths and interests of my team members to craft an impactful and realistic vision of Singapore in 2050. We Singaporeans are so diverse in terms of our background, education, and what aspects of the future we are passionate about and learning how to bring everyone’s unique strengths together towards a common vision of the future has been something I learned to do as our group developed our pitch for our vision of Singapore’s food sustainability.”

Group Presentations



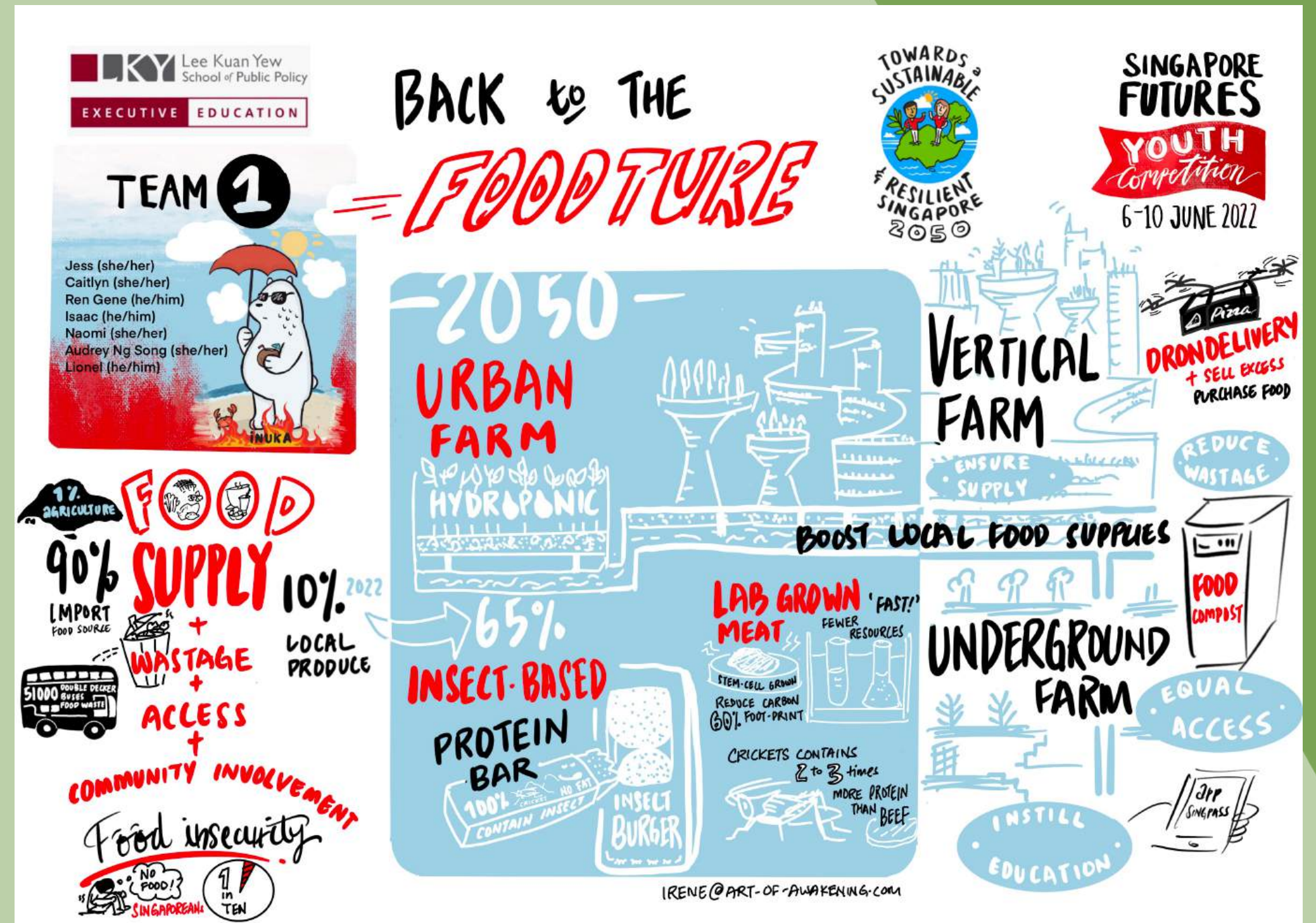
Team 1

Faced with land scarcity, Singapore currently imports over 90% of its food, with local food farms occupying only about 1% of our total land use. In 2019, it was reported that 1 in 10 Singaporeans experienced food insecurity. Disruptions in global supply chains due to COVID-19 demonstrated the importance of increasing domestic capabilities in food production.

In 2050, Singapore would optimise spaces in residential areas for community gardens and urban farming. At the same time, underground and floating urban farms would be built to maximise available space while supplying our nutritional needs. These will diversify food supply and promote community integration. Urban farming would also be incorporated into school curriculum to educate students about healthy lifestyles and environmental sustainability.

Moreover, compost bins would be stationed in every neighbourhood to promote more sustainable practices in the community. Equipped with vermicomposting systems and technology, these bins will facilitate the recycling process to convert food waste into fertilisers, all while reducing methane gas emission and reducing landfill waste.

The government would shift towards greater investments in research and development to explore alternative food sources to meet our nutritional needs. With lower carbon footprints and fewer ethical concerns, lab-grown meat and insect-based protein bars would be available commercially as substitutes to traditional meat. The future of food security in Singapore would also include the use of drones and robots to deliver excess food to families, while allowing lower-income families to purchase food and groceries at discounted prices.



Team 2

In 2050, the future of social mobility and education in Singapore would alleviate inequalities in opportunities as education is accessible and affordable to all. The curriculum would allow students to choose from a wide range of electives, enabling them to develop their strengths across different areas of interests. Student performance would be evaluated based on reflection and progress instead of benchmark assessments. Technology would be used to promote a dynamic learning experience characterised by active collaboration between students.

To get to this future, the government will provide schools with the resources and technology tools to engage students in

the classrooms, making online learning accessible to everyone. Augmented reality and artificial intelligence would be used to transform learning and teaching through hands-on experiences and collaborative platforms. In addition, necessary changes will be made to the curriculum to increase the diversity in subjects. These will allow students to practice self-directed learning and pursue their interests.

Lastly, there would be more public discourse about mental health among youths. To change educational culture, it is important for a mindset shift from academic excellence to individual growth and well-being.

Lee Kuan Yew School of Public Policy
EXECUTIVE EDUCATION

TEAM 2

Eldon Sen (any/he/him)
Clarence Koh (he/him)
Shannon (she/her)
Chloe (she/her)
Tessa (she/her)
Devin (he/him)

FUTURE FORWARD SCHOOL

NAJAT INSTITUTION
"L'éducation pour tous"

TECHNOLOGY
TO LEARN AND CONVERSE

Education
Should be a "SOCIAL ELEVATOR" freedom TO EXPLORE

UNSUSTAINABLE
I MUST BE TOP IN CLASS
SCORE A+
PARENT SOCIETY PRESSURE
INTENSE + FEAR
COMPETITIVE
INEQUALITY RESOURCES AMONG SCHOOLS
ENRICHMENT TUITION TOO EXPENSIVE

flexibility & fairness
MUSIC
MATHS
SCIENCE
MENTAL WELL-BEING
VALUES
PASSIONS
PRIORITY

GOVERNMENT POLICY
MODULAR CURRICULUM
ONLINE LEARNING
SELF-REFLECT / PROGRESS ASSESSMENT

TECHNOLOGY ADVANCEMENT
AR
VR
COLLABORATE PLATFORM

CHANGE OUR SOCIAL MINDSET
NON-ACADEMIC SUCCESS
MENTAL HEALTH

IRENE@ART-OF-AWAKENING.COM

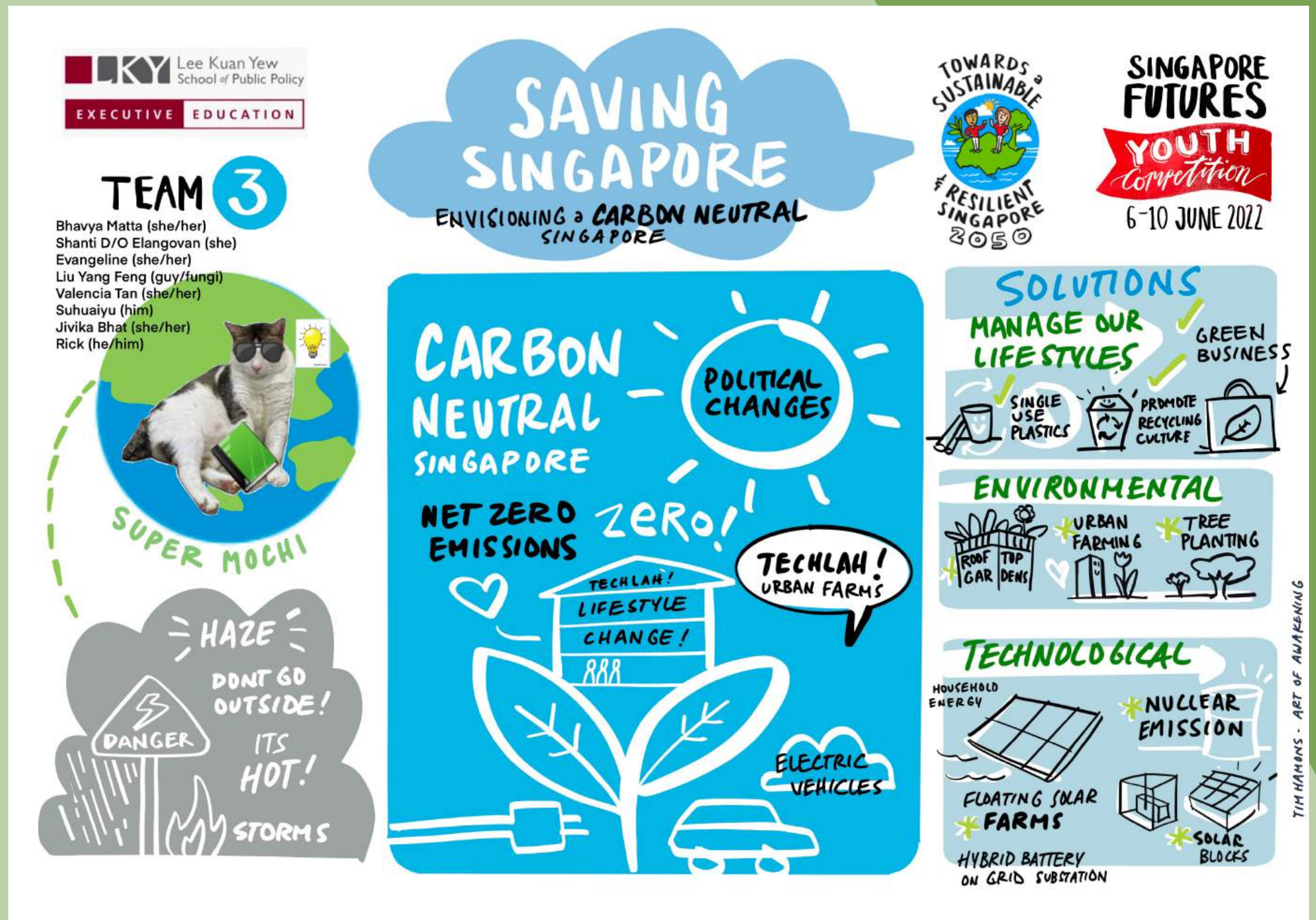
Team 3

Tracing Singapore's current climate trajectory, extreme weather events such as tropical storms, smog, severe droughts and extreme temperatures are not completely out of our future. With limited land space and natural resources, it is challenging for Singapore to harvest sufficient solar energy or delve into other forms of renewable energy, and normalizing greener technologies will be difficult as many are accustomed to current unsustainable ways of living.

In 2050, Team 3 envisions a carbon neutral Singapore with net zero emissions to change Singapore's climate future. As part of their Save Singapore Plan, Singapore's Ministry of Sustainability will be partnered to substitute single-use plastics for paper straws and wooden utensils, provide subsidies and tax cuts for green businesses and through education about recycling culture.

On the environmental front, more rooftop gardens, urban farming projects and tree planting projects can be kickstarted with help from partners like Singapore's Health Promotion Board and Housing Development Board. More permits can also be given for residents to have rooftop or carpark farms. These environmental measures can increase carbon dioxide absorption, and reduce urban heat island effect.

Furthermore, organizations like Energy Market Authority, Keppel Electric and Sembcorp can be partnered to install more floating solar farms, nuclear fusion reactions, hybrid batteries on grid substations and providing solar blocks for every household. This way, Singapore can harvest and store more renewable energy, to transition away from fossil fuels.



Team 4

In Singapore's current reality, the nation is characterised by the unhappiest workforce in the world, with about 48% of employees stating that they were unhappy in their workplace and would unlikely recommend it to a friend.

The future of work and leisure would see a heavy emphasis on intergenerational learning and lifelong learning. Both virtual and physical spaces will connect younger generations with older adults, creating opportunities for them to interact, bond and learn from each other.

Educators would shift from being authoritative sources of knowledge to moderators who guide students in their learning journeys. There would be a heavy emphasis on values of purpose, identity, growth and development in the classroom. From the arts and humanities

to mathematics and science, students would be given more freedom to choose their own courses, allowing them to achieve genuine fulfillment during the learning process.

In 2050, Singapore would emerge as a hub for culture and arts in Asia. A career in arts would be perceived as a respected pathway, while society loses its stigma around the study of humanities and liberal arts.

To achieve this future, technology and automation will be used to make jobs more efficient. A more efficient workforce would correspond with shorter working hours, with employees working only about 3 to 4 hours a day. This sets aside time for individuals to pursue their passion across different areas of interest.

Lee Kuan Yew School of Public Policy
EXECUTIVE EDUCATION

TEAM 4
 Nicale (she/her)
 Kenson (he/him)
 Nicole (she/her)
 Sangsoo (he/him)
 Sruti (she/her)
 Joanne (she/her)
 Yannis (he/him)

LEISURE, WORK, and UTOPIA

TOWARDS A SUSTAINABLE & RESILIENT SINGAPORE 2050

SINGAPORE FUTURES YOUTH Competition
6-10 JUNE 2022

Artists AS A RESPECTED CAREER
ARTS SCENE FLOURISHING

TEACHERS AS MODERATORS

WORK/LIFE BALANCE

GENUINE FULFILLMENT

EMBRACE OURSELVES

JOBS ≠ WORTH

FREEDOM TO CHOOSE

BREACH THE GENERATION GAPS

TEACHERS AS AUTHORITY SOURCES OF KNOWLEDGE

PEOPLE LOSING DRIVE FOR AMBITION

LEARNING AS A CHORE

CAN SINGAPOREANS BE THE HAPPIEST PEOPLE IN THE WORLD?

JOURNEY TO SELF FULFILLMENT

2022 **2050**

Team 5

The future of food security includes introducing community fridges where residents can store excess or unsold food in more towns, thereby reducing wastage and alleviating the financial burden for lower-income households. Non-profit organisations would partner with different stallholders to redistribute non-perishable and unspoiled meals to those in need.

Organic building designs would be incorporated, and community gardens would be found in every neighbourhood to fulfil Singapore's '30 by 30' vision to locally produce 30% of our nutritional needs by 2030. This goal is further expanded and aims to locally produce 50% of our food supplies by 2050, with the broader goal of increasing food diversity in mind. A focus on

agriculture will be embedded into school curriculum and culture to encourage a self-reliant food production mindset from a young age.

There would be greater investment in research and development for lab-grown meat as an alternative food source. Scientific advances would help Singapore achieve a circular food system by accelerating the conversion of food waste into new food ingredients or materials like fuel.

In the future, the government would provide subsidies to develop agricultural farms and grants to train workers for the agricultural industry. Singapore would also be a signatory to bilateral and multilateral agreements for international exports and trade.



Team 6

The future of social equality and mobility in Singapore would include greater support for the less privileged alongside increasing youth participation in civil society to represent and address their needs. A stronger national identity would mean that the wealthy is willing to bear a higher tax burden to alleviate the financial burden for lower-income individuals.

To achieve this future, the progressive wage model would be extended to include all lower-wage sectors. Upskilling would become a focal point to provide more opportunities for social mobility for underprivileged workers in the workforce. Flexible education would facilitate learning for employees who wish to continue their education but are unable to attend school in-person. Rather than academic excellence, inculcating a joy of learning would be of top priority in every school.

In 2050, digitalisation of the workforce would become the norm. Quantum computer and digital devices would be distributed to all households to ensure that the benefits of technology are shared across society. Robots would be implemented in healthcare systems to take over administrative tasks from healthcare providers, allowing more efficient use of resources and reducing healthcare cost.

Climate-proof living spaces and heat-reflecting materials would be introduced to combat rising temperatures in HDB flats. There would be greater government spending in land-efficient housing such as skyscrapers with over 60 storeys and mixed-use development to maximise land use in Singapore.



TEAM 6

- Janine (She/her)
- Emily (She/her)
- Tan Beng Yang (He/him)
- Manasa (She/her)
- Andrew (He/him)
- El'yez (He/him)
- Aisyah (She/her)



WHEN I AM 28 YEARS OLDER
EQUALISING INEQUALITIES &
CATALYSING SOCIAL MOBILITY
FOR THE FUTURE



SINGAPORE FUTURE'S
YOUTH Competition
6-10 JUNE 2022



ECONOMY POLICIES 1



2 PROVISION OF TECHNOLOGY



3 LIVING SPACES



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Team 7

In Singapore's current reality, we are consuming more than our waste management system can handle, with our only landfill in Pulau Semakau projected to reach full capacity around 2035. By 2050, Team 7 aims to create a Singapore with a sustainable and resilient waste management ecosystem that minimizes the overall amount of waste generated.

To achieve this future, Singapore's bioplastics market will be further developed through research and development efforts. Reliance on biodegradable resources to produce consumer goods can be maximized through governmental policies which require a fixed percentage of raw materials to be biodegradable, enforcing compulsory use of biodegradable utensils for catering and takeaway services and subsidizing efforts to transition towards biodegradables.

Reducing and reusing waste materials will also be a priority. Community gardens will be revamped to include community compost gardens, encouraging citizens to repurpose their food waste to make fertilizer to feed back to their gardens. The government will also supply households with home-use plastic-eating bacteria composting kits, which citizens can use to eliminate household PET plastic waste.

Community infrastructure will be upgraded to foster a culture of recycling, where material specific and recycling-centric trash chutes will be built that connect directly to centralized sorting facilities. Furthermore, educating residents on the need for recycling and cutting down on excessive consumption help cultivate habit-building in Singaporeans.

Lee Kuan Yew School of Public Policy
EXECUTIVE EDUCATION

TEAM 7

Bhavya Matta (she/her)
Shanti D/O Elangovan (she)
Evangeline (she/her)
Liu Yang Feng (guy/fungi)
Valencia Tan (she/her)
Suhuaiyu (him)
Jivika Bhat (she/her)
Rick (he/him)

I NEED TO BE PROTECTED!

Recycle FOR a LIFE CYCLE

REDUCE WASTE IN SINGAPORE

- RELIANCE BIODEGRADABLE RESOURCES
- OVERHAUL INFRASTRUCTURE RECYCLING + WASTE

CULTURE OF RECYCLING

- MAXIMISE USAGE OF WASTE MATERIALS
- IMPLEMENT @COMMUNITY LEVELS

HABIT-BUILDING

GREEN ROUTINE! EVERY DAY

SOLUTIONS

- BIODEGRADABLE MATERIALS**
POLICIES R&D USED IN PRODUCTION
- REDUCING + REUSING WASTE**
WE DO THIS TOGETHER NUTRIENT-RICH SOIL PLASTIC-EATING BACTERIA
COMMUNITY COMPOST GARDENS BACTERIA EATING KIT

OUR VISION FOR 2050 SUSTAINABILITY HEAVEN

WHERE WILL IT GO? MORE THAN WE CAN HANDLE FOOD BIO TECH WASTE

CHANGE THE WAY WE THINK ABOUT RECYCLING... WE CARE

DEVON

TOWARDS a SUSTAINABLE & RESILIENT SINGAPORE 2050

SINGAPORE FUTURES YOUTH Competition 6-10 JUNE 2022

TIM HANONS - ART OF AWAKENING

Team 8

In 2050, the future of renewable energy would include converting noise into electricity to power street lightings and appliances. Solar panels would be installed on public transports and electric cars to supply renewable energy to all households. Renewable energy like hydropower and geothermal energy would be harnessed to supply energy across the nation, with greater use of solar panels in buildings and manufacturing plants. Petrol cars would be replaced by hydrogen and electrical cars that can only be recharged by solar energy, with excess energy being stored in lithium batteries.

Cultivating social responsibility towards the environment through education and corporate laws is important. Curriculum would be designed to promote climate change education in all primary schools, while allowing students to use virtual reality to experience the full impacts of climate change.

To get to this future, vocational training for younger workers and students and information exchange with experts would be emphasised to provide the creative expertise needed to steadily harness renewable energy from existing resources. The government would also provide energy efficiency funds and grants to companies who innovate ways to harness clean energy. To improve energy affordability, Singapore would also introduce electrical devices with longer life span and better energy efficiency.

Singapore would be a signatory to multilateral agreements and collaborate with neighbouring ASEAN countries to import clean energy and diversify our energy sources. In 2050, Singapore would also reach out to international think-tanks to share expertise on clean energy and build our clean energy grid.

Lee Kuan Yew School of Public Policy
EXECUTIVE EDUCATION

TEAM 8
Yan Long (he/him)
Emmeline (she/her)
Xavier (he/him)
Tan Jia min (she/her)
Shriya (she/her)
Jin Hao (she/her)
Janna (she/her)
Zi Yue (he/him)

DOSTRANAUT

TOWARDS SUSTAINABLE & RESILIENT SINGAPORE 2050

SINGAPORE FUTURES YOUTH Competition 6-10 JUNE 2022

TRAFFIC NOISE INTO ENERGY
ELECTRIC CARS AS A NORM

HYDRO-ENERGY
GEOHERMAL-ENERGY
ACHIEVE ENERGY MIX

CERAMIC CRYSTALS

AGREEMENTS WITH OTHER COUNTRIES
VR CLIMATE CHANGE in SCHOOLS

50% SUSTAINABLE ENERGY BY 2050
TRANSPARENT SOLAR PANELS REPLACE WINDOWS

MANPOWER BUDGET FOR RESEARCH
IMPORT SUSTAINABLE ENERGY
INCREASE ENERGY EFFICIENCY
DETERMINATION

SKILLS GAP
1 ECONOMY
2 TECHNOLOGY
3 POLITICS

Team 9

With the climate crisis causing unpredictable weather patterns, food security worldwide has been impacted. In Singapore's context, we face unique challenges with having limited land space for agricultural development and lack of individuals interested in farming. With only 1% of land left for agriculture in Singapore, we have little local food supply and are dependent on foreign food exports.

By 2050, Team 9 seeks to create a Singapore with strengthened local food production for a sustainable food supply. Singaporeans will also be more exposed and open to transitioning to genetically modified synthetic meats and protein alternatives such as insects. Community farms will also be on the rise, having more workshops and high participation from the community. New farming technology will also be introduced,

which allows farming in various public spaces such as public housing rooftops, Singapore's surrounding oceans and shipping containers.

This future will be actualized through providing subsidies and initiatives to attract more foreign tech companies to Singapore to advance local food production technologies. Singapore's food and consumer curriculum will be broadened to include local produce and genetically modified food, by introducing youths to them in their canteen food, government organized field trips and cooking classes. Future foods will also be made readily available in supermarkets. Additionally, new university degrees such as Biotechnology and Food Science Studies majors will be introduced, increasing interest and pursuit of agri-tech and farming to develop Singapore's agricultural industry.



Team 10

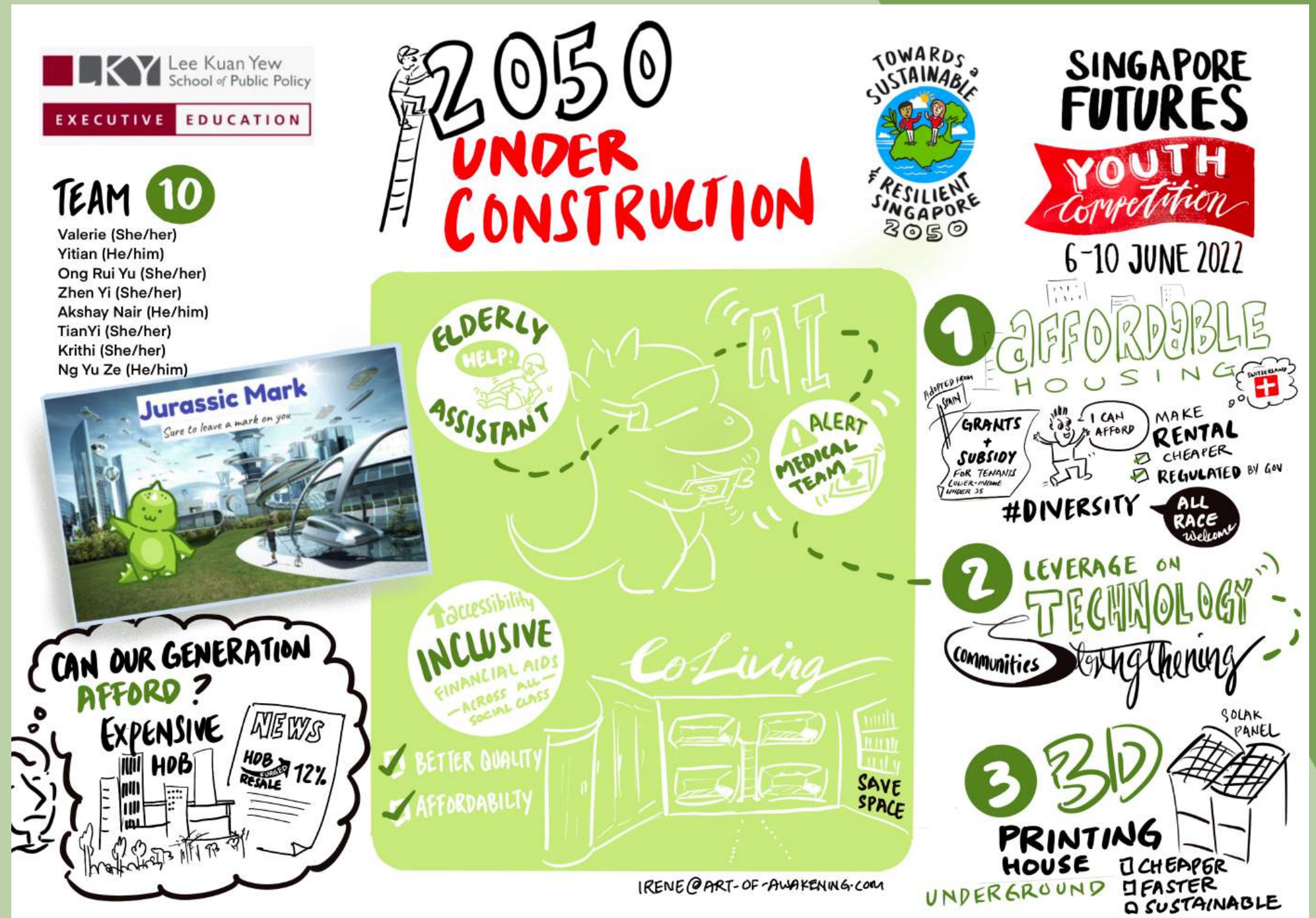
The future of housing affordability in Singapore would include tighter regulation of private rental markets and the provision of funds to ensure that public housing is accessible to all. Co-living spaces would be available for rental by university students and people living alone. The prevalence of "Diversity Friendly Tags" would allow minority groups to find relevant property listings more easily. More grants and subsidies would also be awarded to individuals below 35 years old and lower-income families to cover rental fees and maintenance cost.

To achieve this future, the government would leverage technology to provide inclusive and affordable living spaces for everyone. In 2050, all housing flats would be equipped with solar panels to generate electricity and reduce energy consumption. 3D printing

would be used in architecture and construction, allowing the nation to utilise cost-efficient methods to meet housing demands.

Technology would be used to strengthen communities by creating opportunities and spaces for community integration. Machine learning will provide residents with recommendations based on their interests, occupations and age groups.

Moreover, the government would shift towards greater investment in artificial intelligence and healthcare, such as using vision-capturing devices to identify victims and activate medical personnel for emergencies. This ensures that living spaces are inclusive for the elderly and people with disabilities.



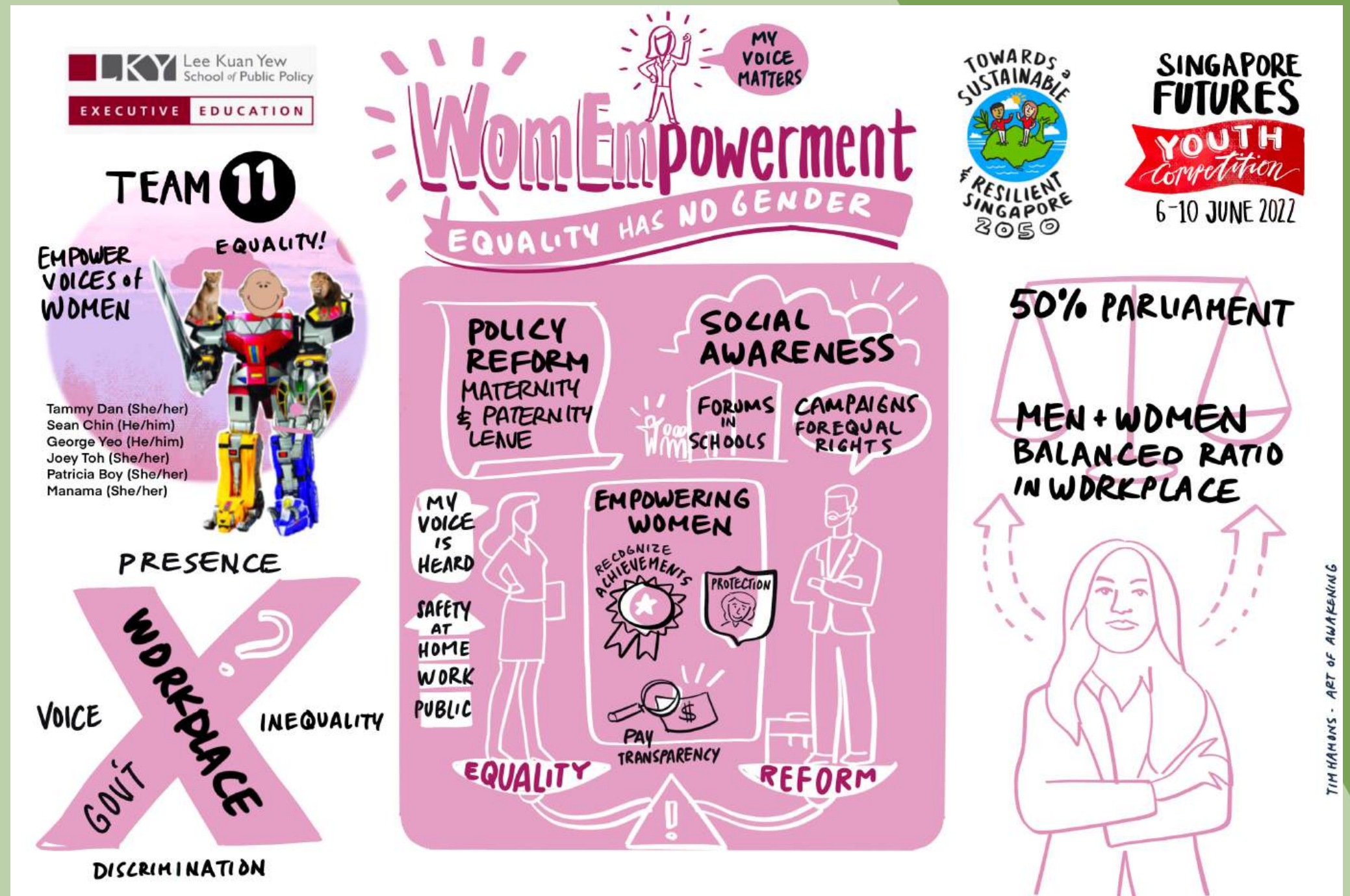
Team 11

In Singapore's current reality, women face various social challenges. Women sometimes receive judgement over their choice of clothing for not looking professional or dressing too scantily, face sexual harassment, and face difficulties getting justice for their sexual assault. In the workplace, women are also hindered by gender stereotypes that expect them to take more domestic roles, or earn less salary than men in equivalent roles.

In 2050, Team 11 hopes to improve gender equality through the following solutions: From the policy perspective, an Equal Pay Policy will be introduced where companies are required to pay workers in a qualification and achievement-based approach with no regard of gender. Increased pay transparency through annual reports will

be required, to ensure all firms abide by this policy. There will be a set quota of an equal number of male and females in parliamentary positions, and a MaPa Care Policy will be introduced where both maternity and paternity leave will be of the same duration to equalize gender-based household expectations.

Social awareness will be spread by the organisation WomEMpowerment, through forums in schools, campaigns for equal roles for both genders, and annual expos to showcase women achievements. Other non-governmental organisations will also advocate for the protection of women in the workforce, household, and public, and there will be special recognition for female achievement in society in order to inspire others in the community.



Team 12

The future of retail consumerism would include public campaigns and advertisements to inculcate personal responsibility. Shops and supermarkets would no longer provide single-use plastic bags as part of Bring-Your-Own strategies that are implemented on a mandatory basis to ensure environmental sustainability. As consumers demand for more ethical supply chain, green certification would be awarded to businesses and products that are resource efficient.

Furthermore, Singapore would refine its shipping and transport processes. In 2050, only ships that are fuelled by renewable energy sources can stop at Singapore. There would be international

agreements for zero-plastic commerce practices to ensure that only eco-friendly packaging is used in shipping and delivery.

There will be increased government spending in green retail solutions and businesses. Coupled with information sharing, public investment into green initiatives provide smaller firms with the financial capacity to adopt more sustainable business models from larger companies. Moreover, government policies would facilitate the entry of multinational corporations with the knowledge and skills needed to expand the nation's commitment to incubate a greener business ecosystem.



Team 13

As Singapore sees large amounts of food waste being produced by households and the food and beverage (F&B) industry, Team 13 seeks to tackle food waste management through the Singapore Green Plan 2050, which promotes recycling of food waste, reduces total waste generated from the F&B industry, and extends the lifespan of Singapore's landfill.

The Singapore Green Plan 2050 envisions farms that make use of smart farming technologies, which can help reduce food waste through preventing underdevelopment of crops or excessive planting. Singaporeans will also be nurtured to appreciate "ugly food", where hawkers and children will be taught to use produce without cosmetic filtering. Generated food waste will also be channelled towards communal composting bins in housing estates or sent to processing plants

which can convert food waste into fertilizer and animal feed, or usable gases like hydrogen.

To achieve this future, Singapore's Ministry of Sustainability and Environment will hold consultations with industry and citizen stakeholders for annual progress checks, organizing community centre education programmes, and providing grants for business transitioning towards eco-businesses. Investments will be made into research and development to improve Singapore's waste management systems, green company awards will be introduced and international research collaborations encouraged for knowledge exchange with other countries. Moreover, education can be provided in partnership with the National Environmental Agency to teach farmers, children and citizens about recycling, composting and reducing food waste.



Team 14

In 2050, the future of economic development in Singapore would involve a higher carbon tax and increased burden on corporations to practice corporate social responsibility and adopt greener business models. Traditional delivery systems would become obsolete, replaced by drone delivery that eliminate plastic waste and carbon emission. 3D manufacturing will replace additive manufacturing to provide precise measurements and reduce waste. Singapore would fully transition to digital payment and cryptocurrency, eliminating the need to manufacture metal coins.

The government would play a more active role in digital transformation, spearheading technology transfer initiatives to sustain its digital competitiveness, and securing energy resources with the completion of the

ASEAN power grid. 6G, the Internet of Things and artificial intelligence for data analysis would become commonplace in our smart nation. Financial systems would be reconstructed using cutting-edge blockchain technology, and automation would be used more widely into the manufacturing and supply sector.

There would be a shift from consumer-driven growth to sustainable growth. New indicators and indices would be used in place of the Growth Domestic Product to measure the degree of environmental degradation, satisfaction of citizens, and progress and equality in Singapore. There would be greater investment to develop clean power technology and fund larger infrastructure projects and solar farm initiatives, allowing Singapore to achieve energy self-sufficiency.



Team 15

The future of ageing in Singapore would include elements such as using nanotechnology to monitor physical health and activate medical personnel, creating a hyperloop integrated healthcare system to reduce commute time and increase healthcare accessibility, using neural interface technology to monitor chemical pathways during human interactions, and harnessing virtual reality to foster intergenerational connectivity. Through this future, these solutions will address the fear of loneliness and isolation that an increasing number of elderlies is facing.

There would be strong emphasis on self-sustenance as seniors are empowered to be pillars of the economy even after retirement. Older adults are provided various opportunities to work in different sectors in society to cultivate financial resilience and individual responsibility.

The elderly would forge valuable communal ties when engaging in recreational activities like community gardening and eco-tourism. Novelty and efficiency would be the driving forces of the local economy, with artificial intelligence and holograms allowing senior citizens to guide tours more easily. These solutions allow them to relive their memories and cultivate their sense of purpose in the process.

Augmented reality and drones would also be harnessed to provide cost-efficient and sustainable solutions to food security. Coupled with increased infrastructure spending for vertical and rooftop farming, the elderly would play a central role in environmental sustainability while advancing Singapore's goal to reduce its reliance on food imports.

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PROJECTED REALITY
imagining... THE COMMUNITY OF TOMORROW [APRICOT]

TOWARDS a SUSTAINABLE & RESILIENT SINGAPORE 2050

SINGAPORE FUTURES YOUTH Competition 6-10 JUNE 2022

BUILD A Utopia WHERE SENIOR CITIZENS LIVE WITHOUT FEAR of loneliness

HEALTHCARE SUSTAINABILITY

RECREATIONAL JOBS

BUILD RELATIONSHIPS
VIRTUAL REALITY NEURALINK TECHNOLOGY

HEALTHCARE
NANO ROBOTIC TECH HYPERLOOP SYSTEM

RECREATIONAL JOBS
ADVANCE COMMUNITY GARDEN TOURISM JOB

AFFORDABILITY of HEALTHCARE

FEELING ALONE

LACK of PURPOSE

RELATIONAL SUSTAINABILITY

PHYSICAL HEALTH MONITORING

INTEGRATED HEALTHCARE SYSTEM

Thank You to Our Partners



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Nanyang Junior College
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Raffles Institution
River Valley High School
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St. Andrew's Junior College
St. Joseph's Institution
Singapore Polytechnic
Tampines Meridian Junior College
Temasek Junior College
Temasek Polytechnic
Victoria Junior College
Yishun Innova Junior College

The support from these institutions as well as other partners from private and public organisations were instrumental in shaping the successful outcomes of our competition. We look forward to the continued collaborations and support from our partner organisations in our future competitions and programmes.

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