

| Course | Thing | Explanation | Date | Important | Index |
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| GESS1019 | Sir Ebenezer Howard | Source of many urban planning ideas in 20th century; green cities, town-country concepts with benefits of both and drawbacks of neither | 23/08/2021 | | 71 |
| GESS1019 | Garden City Model | 6000 acres, 1000 acres town area, 32000 population, town centre, circle within sector shape; Letchworth, Welwyn & Milton Keynes* in UK | 23/08/2021 | | 72 |
| GESS1019 | UK New Towns Movement (1946-1980) | 1st Generation New Towns Stevenage follow Howard's model 2nd Generation New Towns Cumbernauld has added transportation facilities, less emphasis on social balance 3rd Generation New Towns breaks hierarchal residence, so more sense of interest community | 23/08/2021 | | 73 |
| GESS1019 | Le Corbusier | Contemporary City, Radiant City designer | 23/08/2021 | | 74 |
| GESS1019 | Radiant City Model | High-density, open spaces are parks, rigid geometric pattern, separate land use districts, buildings on stilts 5m above ground to allow nature flow below, different speeds of cars belong in different layers | 23/08/2021 | | 75 |
| GESS1019 | Jane Jacobs | Remove slums and mingle the poor with the middle-incomes | 23/08/2021 | | 76 |
| GESS1019 | Raffles Town Plan (1828) | Singapore River was used to divide land use and ethnic zones; Shophouse cities with 5-foot ways | 30/08/2021 | | 101 |
| GESS1019 | Singapore Improvement Trust (1927) | Formed to improve urban environment; WWII severe overcrowding; | 30/08/2021 | | 102 |
| GESS1019 | Singapore Housing Committee Report (1948) | Reported that less than 1/3 of the city were satisfied; SIT housing supply insufficient and unable to clear slums; Recommended the creation of government housing & planning department; Form a master plan | 30/08/2021 | | 103 |
| GESS1019 | Master Plan (1958) | Add a green belt around the city to prevent sprawling; Orchard Road; Jurong, Woodlands, Yio Chu Kang; Open space targets from 0.34 to 1.1ha per 1000 persons; Was too conservative to meet needs so advice was sought from the UN; Planning Department of PMO in charge of land use control, and HDB for housing; REVIEWED EVERY 5 YEARS | 30/08/2021 | | 104 |
| GESS1019 | KAK Plan (1963) | Otto Koenigberger (architect-planner); Charles Abram (lands and legal advisor); Susumu Kobe (traffic economist); Came to Singapore to propose the KAK mission report; "Action planning" for urban development, industrialisation; Performance standards for flexible development control; "Ring City" concept of compact towns around central open area; Everyone lives near the sea | 30/08/2021 | | 105 |
| GESS1019 | Concept Plan (1971) | State and City Planning (SCP) project; Ad hoc organisation of HDB, Public Works Department; Long-range land use and transportation, and how to implement, review and update; REVIEWED EVERY 10 YEARS | 30/08/2021 | | 106 |
| GESS1019 | Concept Plan (1991) | Decentralisation to new regional centres; Downtown at Marina Bay; Choices of housing; Technology corridors; Natural environment | 30/08/2021 | | 107 |
| GESS1019 | URA (1989) | Became the main governing body for urban development | 30/08/2021 | | 108 |
| GESS1019 | Concept Plan vs Master Plan | Master Plan is more detailed than concept plan | 30/08/2021 | | 109 |
| GESS1019 | NSL | Inspired by the 1971 Concept Plan | 06/09/2021 | | 143 |
| GESS1019 | CCL | Inspired by the 1991 Concept Plan | 06/09/2021 | | 144 |
| GESS1019 | Policy Framework (40-50 years) | Government-level policies to guide the way | 06/09/2021 | | 145 |
| GESS1019 | Land Use Plan (10-20 years) | URA plans for land usage and zoning; Guidance system | 06/09/2021 | | 146 |
| GESS1019 | Land Development Plan (5-10 years) | The plan goes to the agencies actually building the buildings: HDB, SMRT, NParks, BCA; Regulations and legislation | 06/09/2021 | | 147 |
| GESS1019 | Program of Involvements (1-5 years) | Goes down to the individual vendors and people | 06/09/2021 | | 148 |
| GESS1019 | Master Plan (10-15 years) | Used to guide the land sale program to private developers, reviewed every 5 years, and statutory plan for each land parcel | 06/09/2021 | | 149 |
| GESS1019 | Concept Plan > Master Plan > Development | Concept plan: "Residential"; Master plan: "Malls and MRT"; Development: "Actual construction" | 06/09/2021 | | 150 |
| GESS1019 | Concept Plan phases | Phase 1: Land use requirements (DD & SS) > Residential, Commercial, Industrial, Education, Community, Healthcare, Religious, Arts > Population projection for long-term planning, periodic population census, can plan for distribution of space in the future > Influenced by policy and market trends Phase 2: Strategies and physical structure plan > 1971 Monocentric (EWL/NSL) > 1991 Polycentric (CCL) > 2001 Global Business Center (TEL) > 2011 Growth Nodes (Regional Development) Phase 3: Traffic modeling and refinement > Different structures will give different traffic flow | 06/09/2021 | | 151 |
| GESS1019 | Population White Paper (2013) | Plans for 2030 population | 06/09/2021 | | 152 |
| GESS1019 | MND Land Use Plan (2013) | Plans for 2030 population | 06/09/2021 | | 153 |

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| GESS1019 | Singapore Economic Transformations | 1960 labor: Garments & Textiles 1970 skills: Computer parts & Oil refinery 1980 capital: International service corporations 1990 technology: STEM Today knowledge: Innovation | 06/09/2021 | | 154 |
| GESS1019 | Group project considerations | Central problem; Causes of the problem; Have they already been addressed/are effective?; Recommended policies to address the problem; How will it impact different stakeholders | 07/09/2021 | | 162 |
| GESS1019 | Group project timeline | Sep 28: Short ungraded presentation about the problem statement Oct 1: One page proposal with brief description, importance, plan to complete the project and submit in Student Submissions/Group Project/Proposal/Tutorial Group 3; Oct 11: Instructor meets each team individually to discuss the project, topics are flexible; Oct 25: Final presentation (11+3 mins) Nov 19: Softcopy of final report; Nov 23: Peer evaluations | 07/09/2021 | | 163 |
| GESS1019 | Concept Plan (2001) | Quality of life enhancement; Knowledge-based economy; Managing impact of IT; "Towards a thriving world-class city"; Dynamic economy, distinctive identity & delightful recreational place; Develop CBD; Impact-based industrial zoning system (B1 non-pollutive vs B2 pollutive with 50m buffer); Bring more B1 jobs closer to home; White zone to permit multiple uses; Public consultation via internet and focus groups to balance scarce land and retain identity; Plan for 5.5 million ppl; | 13/09/2021 | | 181 |
| GESS1019 | Concept Plan (2011) | 2013 Population white paper encouraging immigration; Integrate greenery with living environment; Enhance transport connectivity; Sustain vibrant economy; Park connectors; 85% household to live within 400m of a park; 80% household to live within 10min from train station; Decentralise central jobs to Jurong Lake, Woodlands, Tampines | 13/09/2021 | | 182 |
| GESS1019 | MND Land Use Plan (2030) | Ministry of National Development propose land use to combat aging population | 13/09/2021 | | 183 |
| GESS1019 | Master Plan 1999 | Proposals have to be made available for public inspection & comments; If no objections, then it will be made official | 27/09/2021 | | 210 |
| GESS1019 | Planning Act | Deals with development control (implementation of physical planning rules); Ensure compliance & stuff; Control externalities; Adequate provision of public goods; Proper functioning of the environment; Developments outside a conservation area must have "planning permission"; Developments within conservation area must have "conservation permission"; All subdivisions must have "subdivision permission" | 27/09/2021 | | 211 |
| GESS1019 | Development control framework | Written permission is valid for 2 years; Provisional permission is valid for 6 months (still have developmental issues, or needs preliminary work); Consider land use, plot ratio, building height, building setback (gap between main building and pavement), building coverage; | 27/09/2021 | | 212 |
| GESS1019 | Special Control Areas | Areas subject to security requirements to confirm upon submission of proposal; | 01/10/2021 | | 215 |
| GESS1019 | Government Land Sales | Used to implement Concept Plan and Master Plan; MND/URA announces programme twice a year; Sites for different land uses; SLA is the representative for owning the land; JTC for industrial development; Done mainly by public tender | 04/10/2021 | Important | 216 |
| GESS1019 | Development charge | Some of the revenue for developments should go back to the public, so they charge developments for various things; If they try to build a high-rise in a low-rise place, they kena charge; If they try to disrupt the general feel of the buildings, they kena charge; They can get certain permissions / rewards BCA Green Mark - building is very green (Platinum 2%, Gold 1% bonus floor space); Strategic Development Incentive Scheme - redevelop older buildings in strategic areas (CBD, Orchard Road) (Quality design, promoting transit use, other uses gives you bonus floor space); CBD Incentive Scheme - encourage the development of mixed-use buildings; But certain developments can be exempt; Enhancement of conserved buildings; | 04/10/2021 | | 246 |
| GESS1019 | New Town model | Precinct - Neighbourhood - Town | 11/10/2021 | | 333 |

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| GESS1019 | Planning Models | <p>Urban planning has shifted from creative designers to data-driven (both have strength & limitations);</p> <p>Data-driven: comprehensive & practical but complex & restricted by politics, physical, community representation restraints;</p> <p>Stakeholders (Arnstein 1969 typology of public participation says there are 8 rungs of the participatory ladder): elected, public servants, agencies, consultants, public;</p> <p>Lichfield Model (Masterplan 1998): involvement by voting, opinion polls, interest group discussions</p> <p>Travis Model: preparatory process, basic planning, development design all involves the public;</p> <p>Roberts Model: planners only make proposals, but the public makes the decision (very slow, costly, heavily influenced by demographics, lack of awareness</p> | 11/10/2021 | Important | 334 |
| GESS1019 | Heritage Area | <p>Kevin Lynch (1972) "What Time is This Place:</p> <ul style="list-style-type: none"> - Personal image of time is crucial for individual well-being - Desirable image of the city is one that "celebrates and enlarges the present" while making "connections with past and future" <p>Selecting conservation areas</p> <ul style="list-style-type: none"> - Done by URA (found on URA Space) - So far 7000 buildings in 100 areas are conserved - Made up of an area, a single building, or a group of buildings - Stage 1 determine qualification based on: <ul style="list-style-type: none"> -- Architectural merits (representativeness, aesthetic, creative or technical qualities) -- Historical & Social significance (important to culture, association with event or development) -- Age (before 1960, example of prominent builder or architect) -- Rarity (demonstration of distinctive design) -- Contribution to environment (cheerleader effect, harmonious design) -- Economic impact - Stage 2 determine if building qualifies as a national monument <p>3R conservation guidelines:</p> <ul style="list-style-type: none"> - Maximum retention - Sensitive restoration - Careful repair <p>Conservation areas:</p> <ul style="list-style-type: none"> - Historic Districts (Boat Quay, Chinatown, Kampong Glam, Little India) - Residential historic districts (Cairnhill, Emerald Hill) - Secondary settlements (Beach Rd, Geylang, Jalan Besar, Joo Chiat, River Valley) (Building height is capped) - Bungalow areas <p>Implementation strategies</p> | 18/10/2021 | | 379 |
| GESS1019 | Built Heritage | <p>Incremental and integrated approach is needed to improve and build upon what is already there;</p> <p>Purposes:</p> <ul style="list-style-type: none"> - National identity - Urban design & appreciation of traditional forms - Tourism & economy | 18/10/2021 | | 380 |
| GESS1019 | Transport planning basics | <p>Traffic - focus on road capacity</p> <p>Mobility - focus on movement of people and goods</p> <p>Accessibility - focus on opportunities</p> <p>Activity - why people go to places</p> <p>Step 1: Trip generation (Internal, External)² (Listing and estimating the connections)</p> <p>Step 2: Trip distribution (Residential, Industrial, Commercial)² (Volume of connections)</p> <p>Step 3: Modal split (Bus, Train, Both)</p> <p>Step 4: Trip assignment (Find the least cost way to allocate resources)</p> | 25/10/2021 | Important | 432 |
| GESS1019 | Singapore land transport plans | <p>MND Land Use Plan 2030</p> <ul style="list-style-type: none"> > Expand road network but invest in public transport > Achieve doubling of rail network to 10 min walk from MRT station > CRL, JRL > More bus routes > Sheltered walkways > Integrated transport hubs (Fairprice Hub, Bedok Mall, Northpoint, Jurong Point) > Cycling paths > Barrier-free transport system for seniors & disabled > Achieve 75% public transport share by 2030 | 01/11/2021 | | 454 |

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| GESS1019 | LTA Land Transport Master Plan 2040 | <p>2018 set up an advisory panel and launched engagement exercise to get feedback on:</p> <ul style="list-style-type: none"> > How to make "Walk Cycle Ride" as the go to way to travel (comfort, choice, speed) > How to make that more inclusive <p>9 recommendations grouped into 3 categories:</p> <ul style="list-style-type: none"> > 20-min town 45-min city >> Seamless multi-modal travel >> Spread out amenities > Transport for all >> Developing transport worker skills >> Infrastructure for barrier-free travel > Healthy lives, safer journeys >> Community spaces >> Smart technology >> Noise barriers >> Environment technologies | 01/11/2021 | | 455 |
| GESS1019 | Land Use issues | <ul style="list-style-type: none"> > Trilemma between quality, affordability, profitability > Mismatch of future supply-demand > Car-ownership aspirations > Legitimate use of nature reserves | 01/11/2021 | | 456 |
| GESS1019 | Singapore transport policies | <p>Vehicle Quota System 1990</p> <p>ERP 1998 (Gantries, flexible, equitable)</p> <p>Congestion Pricing Scheme 1975 (Pay after entering zone)</p> | 01/11/2021 | | 457 |
| GESS1019 | Public transport business model | <ul style="list-style-type: none"> > Operators pay annual license charges and have to follow Asset Management Requirements > Lower the barriers to entry > Operators can focus on the operating side > Public Transport Council to conduct fare review | 01/11/2021 | | 458 |
| GESS1019 | LKY World City Prize | <p>Solutions are:</p> <ul style="list-style-type: none"> > Creative & innovative > Replicable & scalable > Durable & sustainable > Integrable | 17/11/2021 | | 478 |
| GESS1019 | Plan for long term | <p>Bilbao</p> <ul style="list-style-type: none"> > Recovered valuable land along the river to transition into knowledge-based economy > Improved infrastructure | 17/11/2021 | | 479 |
| GESS1019 | Harness the power of partnership | <p>NYC</p> <ul style="list-style-type: none"> > Mayor Bloomberg focused on improving infrastructure, redevelopment > PlaNYC to address land, water, transport, energy, air issues <p>Seoul</p> <ul style="list-style-type: none"> > Collaborated with community and stakeholders > Engaged the population with ground-up initiatives and gave 5% of city budget to public participatory planning | 17/11/2021 | | 480 |
| GESS1019 | Improving quality of life | <p>Medellin</p> <ul style="list-style-type: none"> > Leaders dedicated to tackle deep-rooted problems in amenities > Transport for the inaccessible places > Social innovation > Great reduction in murder rates | 17/11/2021 | | 481 |
| GESS1019 | Innovative design & the arts | <p>Bilbao</p> <ul style="list-style-type: none"> > Arts as symbolic transformation of the city and tourism <p>Seoul</p> <ul style="list-style-type: none"> > Transition DongDaeMun into a cultural centre | 17/11/2021 | | 482 |
| GESS1019 | Public spaces | <p>New York</p> <ul style="list-style-type: none"> > 3.8bill for renovating and creating new parks | 17/11/2021 | | 483 |
| GESS1019 | Garden City (around 1900) (Sir Ebenezer Howard) | <p>Town magnet</p> <ul style="list-style-type: none"> + Better employment, facilities - High rent and urban life <p>Country magnet</p> <ul style="list-style-type: none"> + Resources and natural - Lack of facilities and susceptible to weather <p>Town-country magnet</p> <ul style="list-style-type: none"> > Established to combine the advantages of both > Town centre is a circular town garden > Farms are on the outskirts of town > Town and Country Planning Association (TCPA) established Letchworth and Welwyn <p>Influence</p> <ul style="list-style-type: none"> > Urban decentralisation > Integration of nature into cities > Development of new town communities | 17/11/2021 | | 484 |
| GESS1019 | New Towns Movement | <p>1st Gen</p> <ul style="list-style-type: none"> > Low density > Town centres accommodate economic and social needs > Range of housing types <p>2nd Gen</p> <ul style="list-style-type: none"> > Neighbourhood centres satisfy economic needs <p>3rd Gen</p> <ul style="list-style-type: none"> > Everything is mixed-use > Interest-based community is created | 17/11/2021 | | 485 |

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| GESS1019 | Radiant City (1935) (Le Corbusier) | <p>Ideas</p> <ul style="list-style-type: none"> > High-density vertical > Rigid geometric pattern > Separate land use districts > Stacked highways and rail <p>Influence</p> <ul style="list-style-type: none"> > Vertical separation of transport > Singapore's New Towns & CBD | 17/11/2021 | | 486 |
| GESS1019 | Broadacre City (1935) (Frank Lloyd Wright) | <p>Ideas</p> <ul style="list-style-type: none"> > Decentralised > Large grid of arterials in the countryside > Superhighways to connect the region | 17/11/2021 | | 487 |
| GESS1019 | Jane Jacobs | <p>Ideas</p> <ul style="list-style-type: none"> > Community should have full control over the living space | 17/11/2021 | | 488 |
| GESS1019 | Raffles Town Plan (1828) | <p>Ideas</p> <ul style="list-style-type: none"> > Focussed on harmony, efficiency, sanitation > Grid layout for roads > Segregation of races and professions > Green spaces > Shophouses | 17/11/2021 | | 489 |
| GESS1019 | Singapore Improvement Trust Master Plan (1958) | <p>Ideas</p> <ul style="list-style-type: none"> > Focus on inner city housing and street layout > Regulate type and intensity of developments > Reserved spaces for facilities > Spreading people out to outer areas <p>Problems</p> <ul style="list-style-type: none"> > Cannot keep up with rapid change | 17/11/2021 | | 490 |
| GESS1019 | KAK Plan (1963) | <p>Ideas</p> <ul style="list-style-type: none"> > Ring city of towns > 11 employment centres > Everyone lives close to the sea | 17/11/2021 | | 491 |
| GESS1019 | Ring Concept Plan (1971) | <p>Ideas</p> <ul style="list-style-type: none"> > Used a work-trip model > Southern belt development > Green spaces between towns > Set aside Jurong for industrial and Changi for airport | 18/11/2021 | | 492 |
| GESS1019 | Concept Plan (1991) | <p>Ideas</p> <ul style="list-style-type: none"> > Paid attention to quality of life issues > Development of Marina Bay, technology corridors, environment > 5 planning regions | 18/11/2021 | | 493 |
| GESS1019 | Development Guide Plans | <p>Ideas</p> <ul style="list-style-type: none"> > Materialise 1991 concept plans for implementation > Encourage public participation > Focusses on separate areas > Building height and land-use requirements > Data Collection, Analysis, Outline plan, Draft, Statutory exhibition, Statutory master plan | 18/11/2021 | | 494 |
| GESS1019 | Singapore urbanisation goals | <p>Basic needs of people</p> <ul style="list-style-type: none"> > Transport > Safeguard nature reserves while improving open spaces and waterways > Build houses for sale and not rent <p>Basic functions of land</p> <ul style="list-style-type: none"> > Need sufficient seafront area for harbour and port > Need shorter buildings near airport > Distance factories from residential areas <p>Sustainability of land</p> <ul style="list-style-type: none"> > Preserve historical buildings and heritage sites <p>Liveability for people</p> <ul style="list-style-type: none"> > Each town should be self-sufficient | 18/11/2021 | | 495 |
| GESS1019 | Master Plan | <p>Objectives</p> <ul style="list-style-type: none"> > Translates broad long-term plans into more detailed plans > Shows permissible land use <p>Components</p> <ul style="list-style-type: none"> > Special and Detailed Control Plans (SDCP) for public spaces, monuments, housing and underground > Guidelines and controls for specific areas for development > URA uses the guidelines to control development applications and proposals <p>Preparation process</p> <ul style="list-style-type: none"> > Survey, data collection & analysis (population, traffic) > Vision casting & proposals (develop what exactly) | 18/11/2021 | | 496 |
| GESS1019 | Development Control | <p>Objectives</p> <ul style="list-style-type: none"> > Ensure compliance of public health and safety > Provide amenities > Control externalities <p>Permissions</p> <ul style="list-style-type: none"> > Planning permission outside conservation area > Conservation permission inside conservation area > Subdivision permission in all subdivisions | 18/11/2021 | | 497 |

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| GESS1019 | Government Land Sales | <p>Objectives</p> <ul style="list-style-type: none"> > URA development control evaluates and grants approval for projects if they are in line with guidelines and strategies > URA announces program twice a year > Sites for different categories of buildings <p>Development charges</p> <ul style="list-style-type: none"> > Developers need to be levied and compensated for externalities > Floor area incentives if follow planning objectives <p>Development ceiling</p> <ul style="list-style-type: none"> > The value of the development proposed for a site and allowed by URA (proposed gross floor area × DC rate for the use group) <p>Development baseline</p> <ul style="list-style-type: none"> > The value of the approved development after development charge is paid (approved gross floor area × DC rate for the use group) | 18/11/2021 | | 498 |
| GESS1019 | Planning Models | <p>Trends</p> <ul style="list-style-type: none"> > Creative design to data-driven > Prefer complexity > Less affected by political dogma > Affected by practical and legal limitations > Hard to quantify social factors | 18/11/2021 | | 499 |
| GESS1019 | Participatory Planning | <p>Objectives</p> <ul style="list-style-type: none"> > More democratic and provides insights <p>Heirarchy</p> <ul style="list-style-type: none"> > Nonparticipation (just informing them of the changes) > Tokenism (surveys to find out what to do) > Citizen Control (most control) <p>Lichtfield Model</p> <ul style="list-style-type: none"> > Involvement by voting, polls, discussions > Only after proposals have been made and evaluated > Planners have the final say <p>Travis Model</p> <ul style="list-style-type: none"> > Involvement in preparation, planning and design process <p>Roberts Model</p> <ul style="list-style-type: none"> > Involvements in areas that don't need experts > Clear roles defined > Citizens select final plan | 18/11/2021 | | 500 |
| GESS1019 | Transportation | <p>Trends</p> <ul style="list-style-type: none"> > Land use & urban development will generate demand for transport > Accessibility & value of land is affected > Affected by density, growth pattern > Motorisation rate is going up <p>Multi-agent Transport Simulation</p> <ul style="list-style-type: none"> > LTA, URA, Future Cities Lab > Simulate island-wide travel flows on roads and public transport > Based on likely activities of a particular person <p>Public Transport business model</p> <ul style="list-style-type: none"> > Operators pay annual licence charges and have to follow rules > Charged for delays and inconveniences <p>MND Land Use Plan 2030</p> <ul style="list-style-type: none"> > Expand road network > Doubling of rail network, 80% of homes to be within 10-min walk of MRT station > Sheltered walkways > Integrated transport hubs <p>LTA land transport master plan 2040</p> <ul style="list-style-type: none"> > 45-minute city, 20-minute town (bring jobs to home, prioritise public transport) > Transport for all (caring community culture, meet diverse needs) > Healthy lives, safe journeys (reduce accidents, environmentally friendly) <p>Trilemma</p> <ul style="list-style-type: none"> > Quality, Affordability, Profitability | 18/11/2021 | | 501 |
| GESS1019 | Heritage Conservation | <p>Ideas</p> <ul style="list-style-type: none"> > Conservation guidelines more important than development control guidelines <p>Incentives</p> <ul style="list-style-type: none"> > Waiver development charges > Waiver car parking charges <p>Issues</p> <ul style="list-style-type: none"> > Tend to be more tourism-oriented | 18/11/2021 | | 502 |

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| GESS1019 | 2014 Master Plan | Centred on the vision of a socially inclusive, economically vibrant and sustainable living environment for all. It safeguarded adequate land for nature reserves and parks, located key amenities such as schools, medical clinics, hawker centres and employment hubs within or near neighbourhoods, and provided more spaces for community interaction and activities. In addition, over 70 buildings were earmarked for conservation, such as Queenstown Library and Alexandra Hospital. | 22/11/2021 | | 519 |
| GESS1019 | 1991 Concept Plan | Envisioned Singapore's transformation into a 'Tropical City of Excellence'. Such a city would support a healthy balance of work, commerce and a greater variety of leisure and recreational options. The plan also called for an increased sense of 'island-ness' and a city that embraced its coastline and island heritage. These proposals marked a shift towards an emphasis on enhancing the quality of life and projecting the Asian city and tropical island image of Singapore. | 22/11/2021 | | 520 |
| GESS1019 | 2019 Master Plan | Features incentives to encourage a broader mix of land uses within the CBD and other developments islandwide. Other priorities include building future capacity and planning for resilience, with ecological buffer zones to protect and enhance flora and fauna in the city. The Plan also looks to optimise land use through the redevelopment and repurposing of Paya Lebar Air Base, as well as the Greater Southern Waterfront following the relocation of the container terminals to Tuas. The 2019 Draft Master Plan also marks the first time that Singapore's underground space plans for Marina Bay, Punggol Digital District and Jurong Innovation District have been unveiled. By planning and safeguarding underground space upfront, more surface land can be freed up for people-centric uses To introduce a broader mix of uses within the CBD and in other developments around the island. To increase the vibrancy of the CBD beyond being solely a place to work, URA will be introducing incentives for property owners who convert their existing office developments to hotel and residential use. Established precincts across the island are also being rejuvenated through efforts by URA to implement place management and to foster closer cooperation with businesses and other stakeholders | 22/11/2021 | | 521 |
| GESS1019 | 1960s Sewage Water Plan | To build a system that could cope with a growing population, the rapid development of public housing, industrial development in Jurong and the intensive redevelopment of the Central Area. In 1971, the main public sewerage network only served 57% of the population.29 PWD made plans for a rapid expansion of the network, the relaying and re-routing of existing services, and the expansion of sewage treatment works. | 22/11/2021 | | 522 |
| GESS1019 | 1970s Drainage Master Plan (URA HDB) | To ensure that new land developments made adequate provisions for drainage, MND's Planning Department would consult the Drainage Department on technical requirements as part of its planning and building control procedures. Such collaborative efforts to improving the management of sewers and drains would have an important impact on Singapore's water supply in later decades, when the country began to take a serious look at alternative sources for potable water. | 22/11/2021 | | 523 |
| GESS1019 | 1989 Conservation Master Plan | Multiple conservation areas set up | 22/11/2021 | | 524 |
| GESS1019 | 2003 Master Plan | The grid urban pattern adopted also allowed for developments to be amalgamated, sub-divided or phased, according to market needs. URA introduced "white zoning" to encourage mixed-use developments and the formation of livework-play communities in Marina Bay | 22/11/2021 | | 525 |

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| GESS1019 | 2030 Land Use Plan / 2011 Master Plan | <p>The Land Use Plan 2030, released in 2011, and the Master Plans released in the past decade, have articulated strategies to ensure that Singapore has sufficient land reserves and adaptive options set aside to meet the needs of present and future generations in a changing society and an uncertain world.</p> <p>On the economic front, strategies for adaptive life-cycle planning for land use and rejuvenation have been put in place—the decision in 2016 to consolidate port operations in Tuas has freed up significant tracts of waterfront land in Tanjong Pagar and Pasir Panjang.²</p> <p>Other strategies include the co-location of uses and going underground to create space, as well as being nimble and innovative with zoning and other regulations.³</p> <p>The Land Use Plan 2030 has also outlined plans to build a sustainable and liveable environment for a larger population, with inclusive housing, good amenities, integrated greenery and a vibrant economy. In this decade, MND's initiatives and policies have sought to enhance Singapore's liveability, even as the island's living density has had to increase to support economic growth in new centres of activity, as well as to support more sustainable energy and public transport systems. Even as Singapore has become denser, it has also redoubled its efforts to integrate high-quality green spaces and biodiversity within the urban environment. This decade has seen HDB implement its Biophilic Town Framework, while the role of ecosystem services within planning contexts and strategies has been given greater priority</p> | | | 526 |
| GESS1019 | Rail Corridor Master Plan | <p>Woodlands to Tanjong Pagar</p> <p>The authority made co-creation central to their approach. They sought out, involved and listened to a diverse range of voices from the community. Through platforms that included visioning and design workshops, community walks and an ideas competition, a shared vision of planning and design goals was developed in consultation with individuals, experts and groups such as the Nature Society of Singapore, the Singapore Heritage Society and Friends of the Green Corridor.</p> | 22/11/2021 | | 527 |