INTEGRATED MASTER PLANNING & DEVELOPMENT

SG UNHabitat iLUGP
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Outcomes of Liveability
1. High Quality of Life
2. Competitive Economy
3. Sustainable Environment
Singapore Liveability Framework

Principles of Integrated Master Planning and Development

1. Think long term
2. “Fight productively”
3. Build in flexibility
4. Execute effectively
5. Innovate systematically
Outline

Principles of Integrated Master Planning and Development

01 Concept Plan
02 Master Plan
03 Integrated Transport Planning
04 Urban Design Controls
05 Conservation
Concept Plan

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Planning and Development Framework

CONCEPT PLAN
Maps out strategic vision over the next 40-50 years

MASTER PLAN
Guides development over the next 10-15 years

LAND SALES & DEVELOPMENT COORDINATION → DEVELOPMENT CONTROL
Concept Plan Review Process

**Phase 1**
Identify long term land requirements (including planning assumptions, standards and projections) and key planning policies for all land use types

**Phase 2**
Formulate and design structure plans and development strategies

**Phase 3**
Traffic modelling, plan evaluation and refinement

**Phase 4**
Monitoring and update of concept plan
Concept Planning Framework & Strategic Planning Components

8 CRITICAL AREAS
Integrator: URA

INDUSTRY
COMMERCCE
INFRASTRUCTURE
ENVIRONMENT
RECREATION
HOUSING
INSTITUTIONAL USES
TRANSPORT

[MTI/JTC]
[EDB]
[PUB]
[NEA]
[NPARKS]
[HDB]
[MOE]
[LTA]

LAND SUPPLY

POPULATION PROJECTIONS

ECONOMIC FORECASTS

DEVELOPMENT CONSTRAINTS
Concept Plan 1971: ‘Ring’ Plan structure

- Ring of high-density satellite towns around central water catchment area
- Each town separated by green spaces
- Provisions for industrial estate
- Changi airport development and system of MRT and expressways
Concept Plan: Regular 10-year review
Master Plan

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DGP is a product of detailed physical planning in the planning process.

- **Relationship with Concept Plan**
  Concept plan, a long term development strategy, forms the base for all physical development of Singapore whilst DGP translates the intentions of Concept Plan into detailed guidelines.

- **Relationship with Master Plan**
  Completed DGP will be gazetted to replace corresponding part of the existing MP under Section 6 of the Planning Act.

- **Relationship with Development Control**
  Gazetted DGP guide physical development through development control.
The Planning Process

REVISED CONCEPT PLAN
Map out long term land use and development strategy for 40-50 years

DEVELOPMENT GUIDE PLANS
Translate Concept Plan into localised specific plans for each of the 55 planning areas

MASTER PLAN PROPOSALS
Legal document proposed for each planning area

OLD MASTER PLAN
Includes additions and alterations

REPLACES THE OLD MASTER PLAN FOR EACH PLANNING AREA

NEW MASTER PLAN
Comprises Master Plan for each planning area and guides Singapore's future development over 15-20 years
DGP

• Proactive effort to do more systematic and comprehensive planning

• Guide the use and development of land for Singapore

• Set in place a guiding plan, as well as a framework and process that allowed the public and government agencies to rely on the Master Plan as a guiding document for land use decisions

• One DGP for each of the 55 Planning Areas
Each DGP is envisaged to cover a planning area with a population of about 150k served by a town centre.

DGP translates broad vision of concept plan into specific proposals at local level.

It sets out planning objectives and control parameters.
**Stage 1: Data collection**
Data is collected to understand the planning area.

**Stage 2: Data analysis**
The data collected is analysed to assess the area’s strengths and weaknesses and to establish the planning objectives and strategies for the area.

**Stage 3: Outline plan**
An Outline Plan is prepared, detailing the planning control guidelines such as land-use zoning. For selected DGP, exhibitions and dialogue sessions are held on the Outline Plan to gather feedback from developers, industry organisations and members of the public.

**Stage 4: Draft Master Plan**
The Outline Plan is refined into a Draft Master Plan. Any useful feedback that was gathered earlier is incorporated.

**Stage 5: Statutory exhibition**
A public exhibition of the Draft Master Plan is held to allow the public to lodge any objections. As a statutory requirement under the Planning Act, the Master Plan exhibition must be held for a minimum of two weeks.

**Stage 6: Statutory Master Plan**
The Draft Master Plan is revised after all objections from the public have been evaluated. The finalised Master Plan or DGP is gazetted to replace the existing Master Plan for the area that it covers.

**Refinements**

**Monitor & Review**
From DGP to Master Plan

- Check aggregated numbers (e.g. housing, commercial, facilities)
- Make re-adjustment to land use where necessary
- Consolidation at regional level
- Consolidation at national level

55 DEVELOPMENT GUIDE PLANS

1 MASTER PLAN
Partnership with Agencies

- Land use planning as multi-agency effort
  - All agencies have common stake in development of Singapore

- Master Plan Committee (MPC)
  - Involves collaboration among agencies, with URA as coordinator
  - Ensures land is put to best possible use
  - Resolves conflicts and trade-offs
Stipulate allowable use & intensity - Provide transparency and facilitate efficient development control process.

Provide detailed land use plan to guide development for individual land plot.

Reviewed every 5 years

Statutory land use zoning plan
Master Plan

- Statutory land use plan
- Guides development on each plot of land
Tackling the Challenges

**Phase 1** – Basic Infrastructure
1960’s – 1970’s

**Phase 2** – Providing Quality
1980’s – 2000’s

**Phase 3** – Sustainability and Liveability
2000’s - Present
Development of Singapore River and Marina Bay

Phase 1: Basics
1. Sorting out the housing problem after self-governance (Establishment of HDB in 1960)
2. Land acquisition and resettlement
3. Urban Renewal (setting up URD, and URA)
4. Cleaning up the Singapore River

Phase 2: Quality
6. Plans by I.M. Pei and Kenzo Tange
7. Conservation and further urban renewal
8. Singapore River Plan

Phase 3: Sustainability
10. Construction of Marina Barrage
11. Construction of Gardens by the Bay
12. Car-lite City and car-free zones
13. Upgrading of Civic District
14. Development of Greater Southern Waterfront
Phase 1: Challenges at Singapore River and Marina

- Massive overcrowding and uncontrolled urban sprawling
- Pollution turned river into open sewer in the 1970s
- Lost relevance to trade
- How to renew area to spur new economic growth?
Phase 1: Singapore River Clean-Up

Cleaning up pollution at source

- Relocation of Industries
- Resettlement of Squatters
- Street Hawkers
- Industrial Parks
- Public Housing
- Hawker Centre
Phase 1: Singapore River Clean-Up
Cleaning up pollution at source
Integrated Approach to the Singapore River Clean-up

- Master Plan drawn up (1977)
- 26,000 families resettled
- 610 pig and duck farms phased out
- More than 2,800 industrial cases resettled
- 4,926 street hawkers resited into food centres
- Lighterage activities from some 800 lighters in Singapore River resited to Pasir Panjang
- Cost of nearly $300 million, excluding resettlement compensation
Phase 2: Designing Marina Bay

- Marina Bay Downtown
  - Engaged Kenzo Tange and IM Pei to formulate Master Plans for Marina Bay
  - Pei’s plan adopted as it gave more design flexibility for future growth
  - Revisions to Pei’s plan in the 1992 land use plan for a ‘21st century downtown’
Phase 2: Conservation and further urban renewal
Land Acquisition and Land Sales

- Clusters of shophouses acquired
- Packaged for sale to private developers
- Restoration and adaptive re-use
Phase 2: Singapore River Concept Plan 1985

- Planning for 3 distinctive development areas
- Construction of continuous river promenade and pedestrian bridges by the government
- Urban design and conservation guidelines incorporated into land sales conditions for private sector developments
Phase 2: Central Area Structure Plan 1986
Comprehensive Planning for a distinctive city centre

- Basic physical infrastructure completed by 1980s
- Decision to build urban rail network (MRT system) in 1982 -> opportunities to review urban structure of the city
  - Areas for intensive developments around MRT stations
  - Retaining green lungs for the city
  - Urban conservation districts to maintain our distinct identity
- Conservation districts identified as part of the Structure Plan
- Balanced by development potential in new development area, Marina Bay
Phase 2: Planning for Marina Bay

Marina Bay and Kallang Basin Location Plan

Kallang Basin Master Plan

Marina Bay Master Plan

Development of the Singapore River Precinct
First phase of reclamation of land fronting Nicoll Highway

Reclamation of land around Telok Ayer Basin commenced

Reclamation of Marina East commenced

Reclamation of remainder of Marina Centre and area beyond Telok Ayer Basin

Reclamation of land at Marina Bay, Telok Ayer Basin and Marina East based on proposal by I.M. Pei

Reclamation of land for the International Cruise Terminal

Reclamation of land for the construction of the Marina Coastal Expressway

Possible land profile after the relocation of the Tanjong Pagar Port Terminals in future
The 1991 Outline Plan for the Downtown Core DGP – CBD Zone
Phase 3: Sustainability and Liveability

- Allowing seamless extension of CBD and flexibility in staging developments:
  - Grid urban pattern which extends from existing road network within CBD

- Facilitating mix of commercial and residential developments:
  - Land sales sites in Marina Bay zones as white site
Development approach for Marina Bay
Balancing value creation through environment enhancement vs. development potential

✓ Retaining the bay to create a waterfront city centre instead of reclaiming the entire bay to gain additional land

✓ Devoting 100 ha of land for three public waterfront gardens (Gardens by the Bay) instead of maximising revenue and putting it to higher value uses e.g. offices
Phase 3: Marina Barrage
Turning Adversity into Opportunity

Marina Barrage

• Turning Singapore River into a water catchment

• Manage floods in low lying areas

• Community space and water sports
Marina Barrage
Gardens by the Bay

- 101 hectares of high value land set aside for recreation and greenery

- Enhance liveability of the city, providing vibrance and amenity
Vision for Marina Bay

A 24/7 live-work-play environment that encapsulates the essence of a global city

- More than a mere extension of the CBD that shut down after office hours
- A “life-style” precinct with a good mix of commercial, entertainment, hotel, residential and recreation developments
Phase 3: Car-lite City

- Improving accessibility and connectivity:
  - Extensive public transit network
  - Comprehensive network of covered walkways, underground pedestrian links & above-grade connections
  - Cycling paths along major arterials
Phase 3: Enhancing liveability

- Providing places where people will gather for events and their own recreation
  - Ample provision of parks and open public spaces
Phase 3: Upgrading the Civic District

Further enhance conservation efforts and urban rejuvenation

- Stitch together spaces to create an integrated arts, culture and lifestyle precinct.

- Defines district into key identity zones according to their layout.
Programming

Car Free Sundays

Singapore Night Festival
Phase 3: Greater Southern Waterfront

1,000 hectares of land for development after 2030 after relocation of port terminals
Greater Southern Waterfront

Idea 2: Extend the City to Greater Southern Waterfront

Idea 3: Expand the Network of Public Spaces
Integrated Transport Planning

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Land Transport Master Plan
Integrated Developments

Multi-modal Hubs: Serangoon NEX

Northeast region
Population: 120,670

Statistics updated as of June 2015
Serangoon New Town
Serangoon NEX
Serangoon NEX

- Underground MRT - Circle line, Northeast line
- Bus stop
- Bus Interchange (L1)
- Taxi stand
- Commercial
- Public library (L4)
- Pick-up/dropoff
- Underground MRT
- Circle line
- Northeast line
Serangoon NEX Bus Interchange
Serangoon NEX_Underground MRT

Interchange for Circle Line and Northeast Line
Integrated Developments

Multi-modal Hubs: Northpoint City at Nee Soon

Northpoint City @ Nee Soon

North region
Population: 201,970

Statistics updated as of June 2015
Yishun New Town
Northpoint City at Nee Soon
Northpoint City at Nee Soon
Urban Design Controls

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Importance of Urban Design

• Buildings are usually built to the full site potential (i.e. maximum GPR) to optimize the land value.

• **Urban Design**
  – refines the overall land use plan.
  – guides developments to relates to surrounding.
  – safeguards spaces for cultural and leisure activities
  – enhances the quality, aesthetic and character of the built environment
  – shapes a dynamic, distinctive and delightful city
Key Urban Design Elements

Urban Pattern
Building Form
Streetscape
Skyline
Landmark
Open Spaces
Skyrise Greenery
Roofscape
Pedestrian Network
Vehicular Access
Night Lighting
Scenic
Central Area Underground Pedestrian Network

Source: URA
Pedestrian Network

Case study: Orchard

The underground web

NOTE: Overhead and underground links connect 268 Orchard Road and The Heeren.
Case study: Raffles Place

Underground passageway beneath One Raffles Quay

Marina Bay Link Mall

Source: URA
Case study: Raffles Place

CityLink Mall
Raffles Place MRT underpass
Marina Bay Link Mall

Map of CityLink Mall
Raffles Place MRT underpass plan
Map of Marina Bay Link Mall
Case study: Jurong East

Map of J-walk elevated pedestrian network
Pedestrian Network

Case study: Jurong East
Conservation

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A nation must have a memory to give it a sense of cohesion, continuity and identity. The longer the past, the greater the awareness of a nation’s identity.....a sense of common history is what provides the links to hold together a people who came from the four corners of the earth.

S Rajaratnam
Former Senior Minister
Prime Minister’s Office
1986
What is Conservation to a Nation?

- Retain our Valuable Built Heritage
- Reinforces a sense of rootedness & identity
- Contributes to Distinctiveness of Our City
- Conservation Areas are also Attractions
ARCHITECTURAL MERITS

1. Representative of a particular period

2. Exhibits particular aesthetic, creative or technical qualities in design, construction technology or use of material
1819-1919
Immigrant Settlement

1920-1940
Cosmopolitan City

1941-1965
Post-War and Nation Bldg

1965 Onwards
Post Independence

Little India
Boat Quay
Joo Chiat
Swan Lake Gazebo

Pulau Ubin
Tiong Bahru SIT
Fmr Kallang Airport

Ramakrishnan Msn.
Church of Blessed Sacrament
Fmr AIB

Toa Payoh Pkr
Towers
Change Alley Twr

Jurong Town Hall
Criteria for conservation

- HISTORICAL SIGNIFICANCE
- RARITY
- CONTRIBUTIONS TO THE ENVIRONMENT
- IDENTITY
- ECONOMIC IMPACT
Difficulties faced

- Anger and resistance from owners who wished to demolish the old buildings on prime land to sell or to redevelop for profits

- Engineers did not want the hassle of refurbishing or preserving old structures and building elements

- Landlords/owners were not incentivized to do up dilapidated buildings due to Rent Control Act
Enabling efforts of conservation

1989: Appointing URA as the Conservation Authority
Singapore’s Conservation Efforts

1989: Building conservation began to form an integral part of our city planning.
How are buildings selected?

Formation of Conservation Advisory Panel (CAP) i.e. Independent panel to advise on Singapore’s building conservation efforts

- Give inputs on built heritage proposals
- Promote greater public understanding
- Propose buildings for study
Balance of Conservation & Economic Needs

- Highest priority to retain historical buildings while allowing changes and urbanisation to surroundings

- Allow adaptive re-use of old buildings: a balanced & market-orientated approach to approve proposed use

- Provide guidelines to allow creative solutions to optimise use of sites (refer to illustrations)

- Lifting of Rent Control Act to incentivise conservation
Sale of Sites

- Identify the most valuable street blocks to be kept
- Divided into 7 parcels for sale in phases by open tender
THE CHINA SQUARE CONCEPT PLAN

THE CONCEPT

- An exciting and vibrant area, forming a transition between Chinatown, Singapore River and the CBD
- An important node along the future axis leading to the new Downtown
- A vital link in the pedestrian route from New Bridge Road to Cecil Street
- A source of new commercial and hotel space in an excellent location
- An interesting mixture of urban forms, creating a unique blend of old and new
- A centre of activity both day and night, offering a wide range of shopping and eating

A UNIQUE MIX OF OLD AND NEW
Urban Design

- High rise 30-storey developments closer to CBD
- High rise 15-storey edge
- Low rise spine of conserved buildings
- Central pedestrian mall
- Underpasses
Four sites with conserved shophouses were bought by three developers. They are now Far East Square, Capital Square and China Square Central.
Achievements of URA’s Conservation Programme

- Legal Protection & revitalisation of majority of pre-WW2 buildings
- Enthusiastic private sector participation
- Adoption of good restoration practice by many owners
- Widespread public buy-in through consultative approach
- Increasing public awareness
QUESTIONS?