DELAPAN

SPECIAL BORDER ECONOMIC ZONE

EAST

A SMART MANAGED INDUSTRIAL PARK (SMIP)

of the future with centralised utilities and 5G enabled infrastructure for the entire manufacturing supply chain and supporting services.

NORTHERN GATEWAY

area

ADM

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01 PROJECT OVERVIEW AND CONCEPT OF *D8 SMIP*
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03 INDUSTRIAL PARK CLUSTERS
04 MAIN MANUFACTURING CLUSTER
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06 HYBRID INDUSTRIAL PARK
07 GBS AND SUPPORTING FACILITIES
08 SOLAR FARM AND ESG AWARENESS PARK
09 PARK MANAGEMENT
10 LINEAR PARK

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PROJECT OVERVIEW AND CONCEPT OF D8 SMIP

Delapan (D8) is envisaged to be the synonym of the ***Smart Managed Industrial Park (SMIP)*** of the future with 5G enabled infrastructure where AIoT features can be readily tapped into the dedicated service trenches and utility towers.

Smart City concept with 24/7 surveillance in a Gated and Guarded environment together with seamless interface between the centralised facilities and factories will be the added advantage in *D8 SMIP*.

The community will be able to have immersive engagement with the Park Management in terms of business services and utilities support.

The journey of **thrive and vibrancy** starts from the *D8* Experience Centre where an introduction of *D8* will be conducted by the Service Crew where Investment Opportunities and ESG awareness are equally emphasised.

Investors will be hosted in the Sales Gallery with Concierge Manager where the State and Country Investment Policies and Incentives will be explained and the application process to be guided. Global Business Service (GBS) will also be provided for new investors and incubator offices can be housed inside the GBS Smart Centre with meeting and seminar rooms as well as cafeteria and rest area.

Registered Visitors and Students who wish to learn more about ESG and the history of *D8* will be taken on a guided tour from the *D8* Experience Centre to the ESG nature trails where they can ride on chair lifts to visit the solar farm with agrovoltaic farming and explore riverside farm-to-table dining experience. Eco day rest Chalets with solar panels and rain water harvesting roof system will also be featured to express the co-existence of nature and technology in the modern age.

Manpower resources planning will also be part *D8* agenda where TVET schools for vocational students as well as programmes for up-killing and re-skilling will be provided.

Smart Gated and Guarded SME Park will be another component to complete the requirements of the supply chain ecosystem with the participation of the Bill of Materials (BOM) and Balance of Systems (BOS) suppliers within the proximity of *D8*.

D8 E2 enclave will be planned with superior road and drainage design with particular emphasis on efficienct connectivity and flood risk management. Stable electricity supply and uninterrupted water supply with river storage and sponge city design will be another aspect to be looked into for low impact development by specialist consultants.

Finally, together with the above key advantages, the soon to be completed Logistics Hub as well as the status of Border Special Economic Zone / Free Industrial Zone will be the added premium for *D8* to be the ultimate manufacturing investment destination in Malaysia.

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SITE LOCATION

DELAPAN DUAL BORDERS FRONTAGE

The primary Trading and **International Data Transit Gateway** connects **Malaysia, Thailand, and Indo-China**, facilitating efficient data transit between these regions.

Strategically located at the tip of Kedah, closely to Thailand borders at KM 0.8 of North-South Highway

NODES	
Changlun	9km (10 mins)
Arau	27km (25 mins)
Jitra	35km (30 mins)
Kangar	40km (40 mins)
Alor Setar	48km (45 mins)



SITE LOCATION

NETWORK PROXIMITY

A

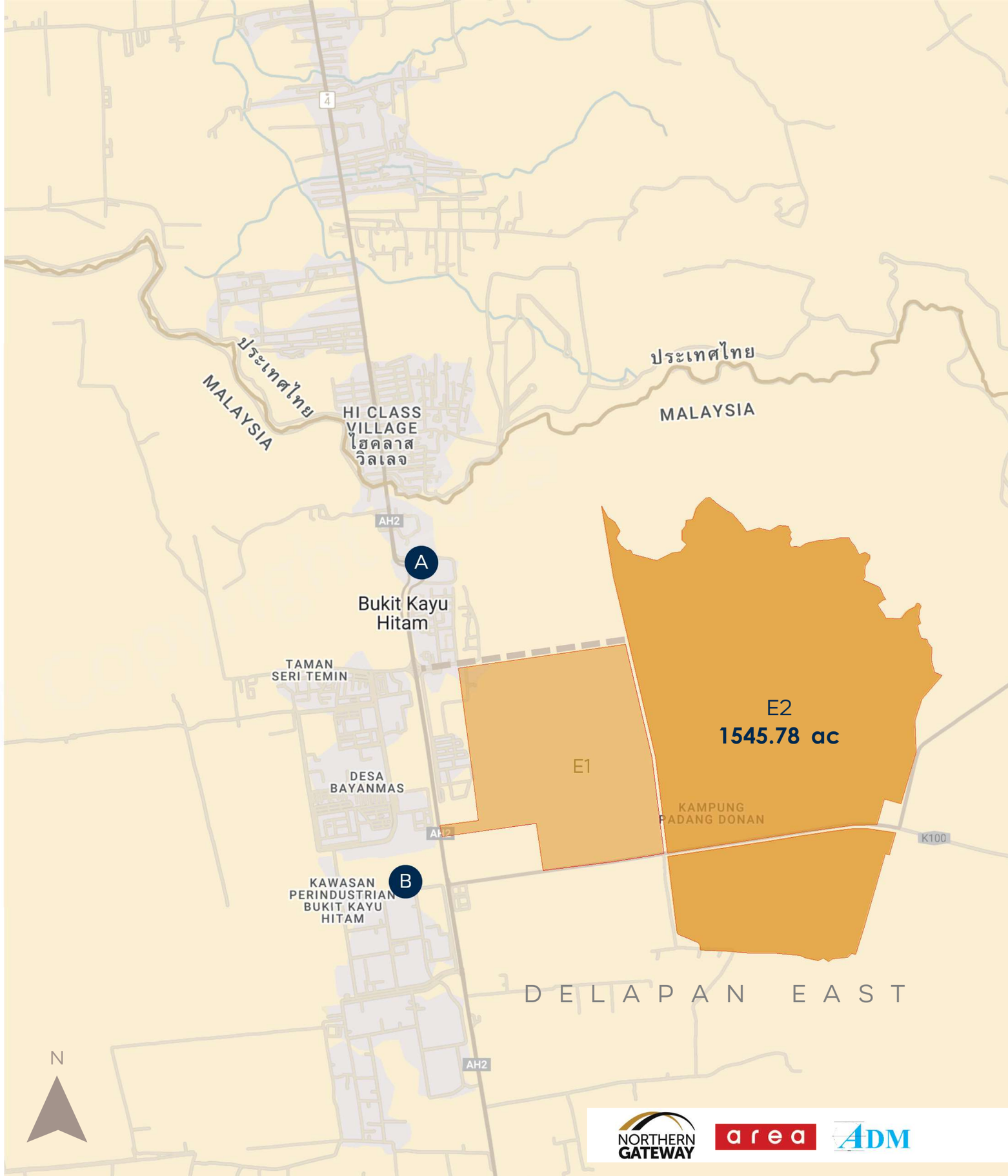


Bukit Kayu Hitam Immigration, Customs, Quarantine & Security (ICQS) Complex

B



Bukit Kayu Hitam Industrial Park



ACCESSIBILITY

MAJOR TRANSIT HUBS

NORTHERN CORRIDOR ECONOMIC REGION (NCER)

Borders development of a centre for high-value industries

DISTANCE

Alor Setar Airport
40km

Hat Yai International Airport
58km

Penang International Airport
159km

Padang Besar Cargo Terminal
48km

Penang Port
138km

CONNECTIVITY

North - South Expressway (E1)
Changlun - Kuala Perlis Highway (194)
Jalan Kangar - Alor Setar (7)
Butterworth Outer Ring Road (LLB) (E17)
Butterworth Kulim Expressway (BKE) (E15)
Penang Bridge

Legend

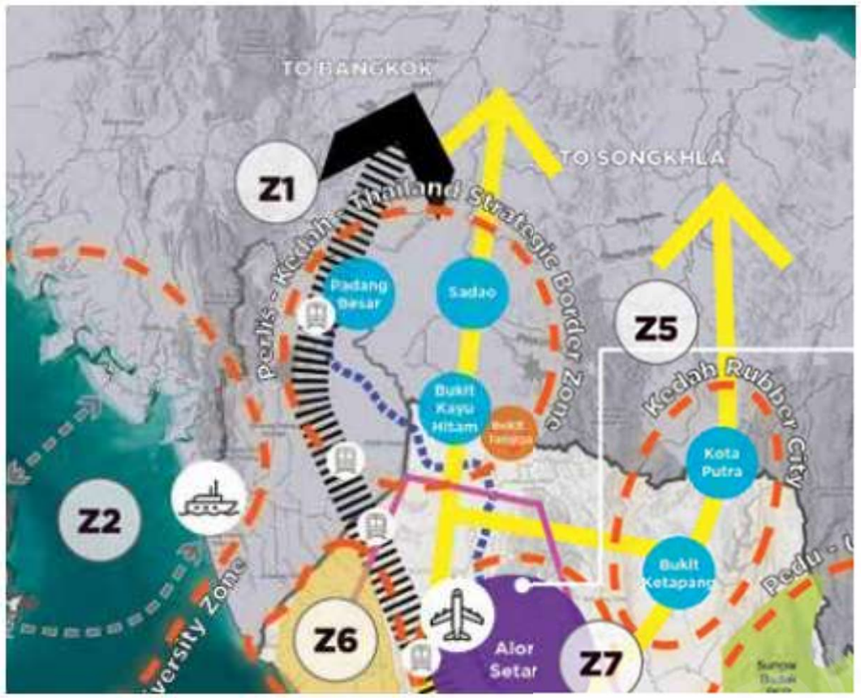
Rail Network

Road Network



LAND INFO

ZONE Z1:
PERLIS-KEDAH-THAILAND STRATEGIC BORDER ZONE

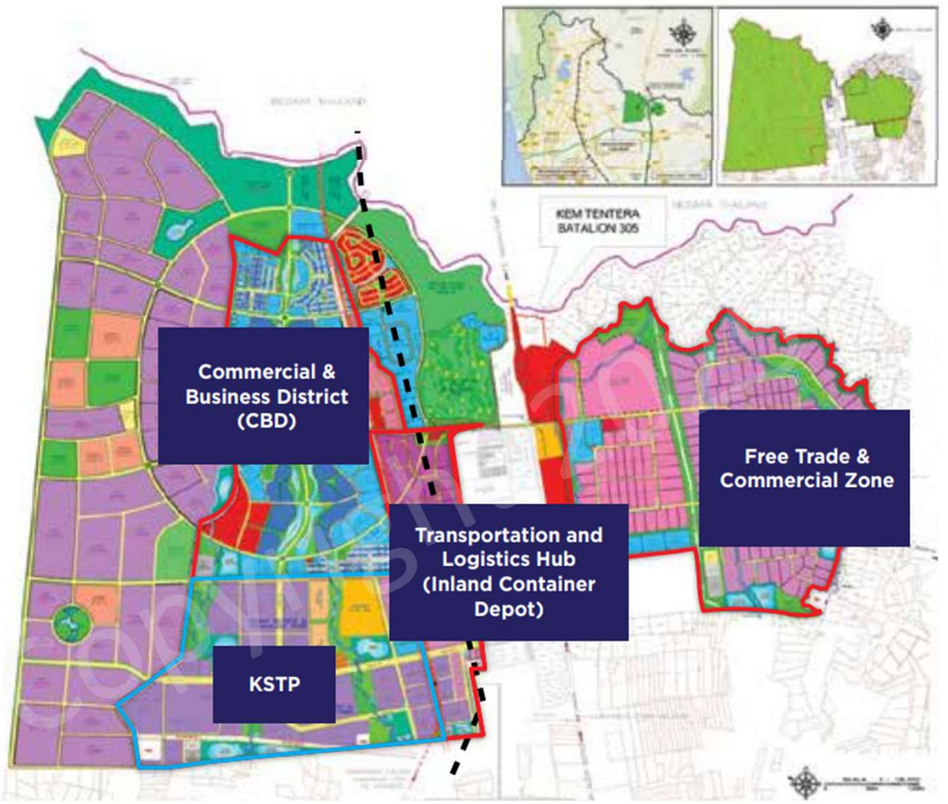


Strategic Development Map of Zone Z1 *(NCER)*

Zone Z1 includes four pivotal economic hubs: **Padang Besar Border Gateway Node, Bukit Kayu Hitam Special Border Economic Zone, Chuping Agro Valley,** and **Chuping Integrated Area**.

Serving as a crucial **border gateway**, Bukit Kayu Hitam is a focal point for catalytic projects, notably the Special Border Economic Zone and the Kedah Science and Technology Park, integrated into the surrounding ecosystem. Agriculture, with a focus on hemp, cash crops, and superfruits, is a key emphasis in this zone, particularly in the Bukit Kura and Bukit Tangga areas.

BUKIT KAYU HITAM SPECIAL BORDER ECONOMIC ZONE (SBEZ)





(NCER)

The **Bukit Kayu Hitam Special Border Economic Zone (SBEZ)** spans **11,000 acres near the Kedah-Sadao border**, serving as **Malaysia's sole border town** on the Asian Highway Network (AH2) connecting **Singapore** and **Thailand**. Comprising the **Kedah Science & Technology Park (KSTP)** and **Kota Perdana SBEZ (KPSBEZ)**, it acts as a catalyst for economic growth in the northern region. KPSBEZ aims to be a secure, efficient logistics hub promoting sustainable practices, while KSTP, focusing on the **Global Research Centre (GRC)** and **Modern Industrial Park**, drives economic development through research. This initiative is anticipated to generate **23,242 jobs** and contribute **RM72.7 billion** to Malaysia's GDP.

NORTHERN GATEWAY area ADM

INDUSTRIAL REVOLUTION 5.0

THE FUTURE READY STEP FOR SUSTAINABILITY

INDUSTRIAL REVOLUTION 5.0

X



(United Nations)

WELFARE TO WELLBEING

The evolving industrial phase involves humans working alongside advanced tech and A.I. robots to enhance processes, with a focus on human-centric approaches, increased resilience, and improved sustainability.

HUMAN-CENTRIC	Added value for workers to attract and retain top talent
RESILIENCE	Maintain stability during difficult periods
SUSTAINABILITY	Net Positive, aim to be part of the climate change solution

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NORTHERN GATEWAY area ADM

OPPORTUNITY AND APPLICATION

BUKIT KAYU HITAM SPECIAL BORDER ECONOMIC ZONE (SBEZ)

FLUID DESIGN

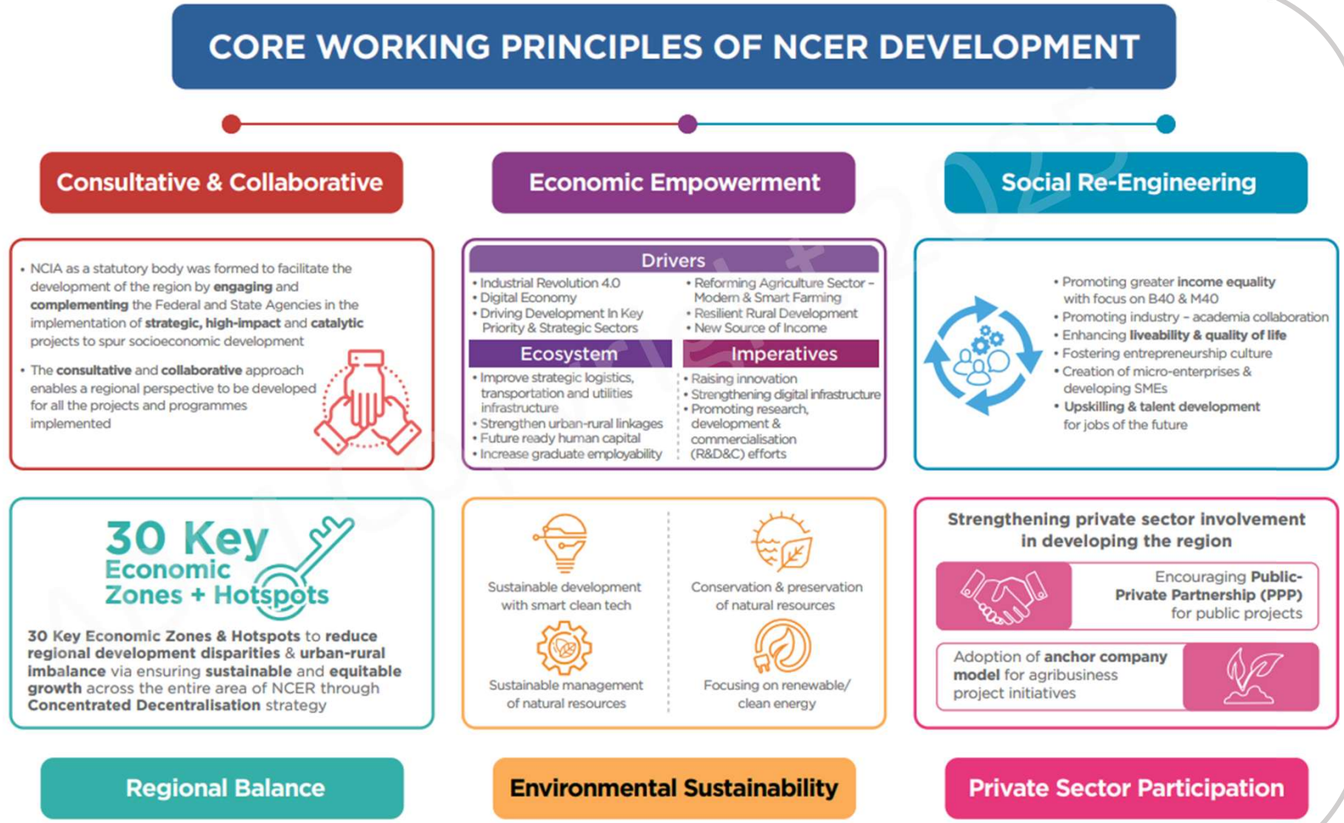
INDUSTRY 5.0

ESG PRINCIPLES

WORK LIFE BALANCE

"Craft a globally renowned industrial park at the epicenter of the free trade zone, melding pioneering industries with avant-garde infrastructure and sustainable practices, all to cultivate a thriving ecosystem of commerce, growth, and advancement."

(NCER)



CONNECTIVITY

INDUSTRIAL CORRIDOR

RESILIENT SECURITY

FREE TRADE ZONE

NORTHERN GATEWAY area ADM

GREEN ENERGY FARM

AGROTOURISM AND AGRIBUSINESS

SOLAR FARM

Adopting renewable energy and an anchor role for future sustainable developments



01

AGROTOURISM

Create visitor experience and learning new innovative agriculture. Boosting the local economy by increasing demand for services like accommodation, food, and transportation.

02

AGRIBUSINESS

A nucleus farm provides technical training to satellite farms, enhancing processes, and using strategic inputs to elevate farming along the value chain. This addresses challenges, promotes competitiveness and sustainability, and encourages the adoption of modern agricultural practices for higher-value produce.



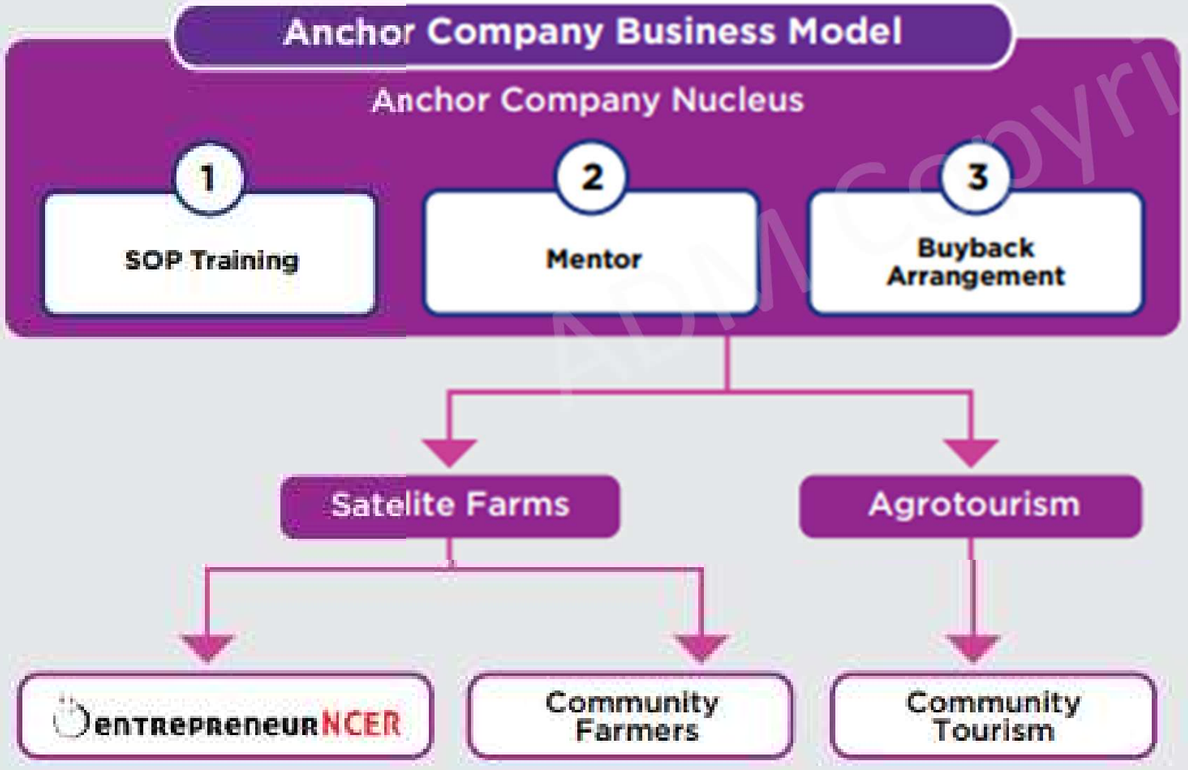
GREEN ENERGY FARM

NCER AGRIBUSINESS ACHOR COMPANY BUSINESS MODEL

Proposed Adoption of Anchor Company Business Model

Aligned to Dasar Agromakanan Negara – Halatuju 2019-2020	Create High-Income Farmers	Promote Competitive & Sustainable Industry
Bridge the gap in value chain	Create agrotourism activities with significant socioeconomic spillover to the local economy	The Anchor Companies are selected as mentors based on their existing track record, readiness and approval from Jawatankuasa Pemandu Negeri (JPN).

The Transformation: Anchor Company Business Model Driven by Private Sector





(NCER)

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NETWORK CONNECTIVITY

5 UTILITIES 1 PLATFORM

1 READY PLATFORM (EARTHWORK)

5



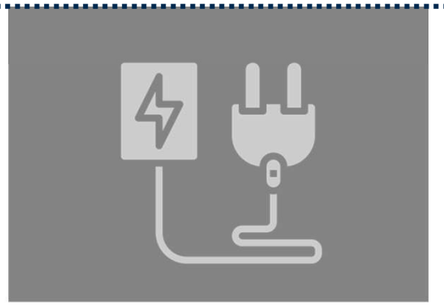
LAND CONNECTIVITY

Connected 1.7 km to North-South Expressway with other major roads access to northern regions Kedah, Perlis and Penang. All logistic centres within 2 hours traveling distance. Additionally, Padang Besar Cargo Terminal is Malaysia's sole rail cargo terminal linked to Thailand.



INDUSTRIALIZED WATER SUPPLY

With the ongoing industrial growth, Pelubang Water Treatment Plant (WTP) will supply extra capacity of 275 MLD, Delapan will also incorporate the option for extra water supply from Kodiang WTP. This new facility will enable access to 185 MLD of water.

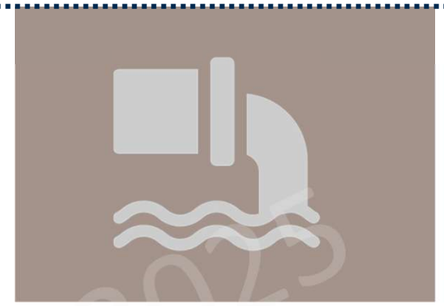


FUTUREPROOF ELECTRICITY

Future ready power supply from three PMUs, with two ready platform 132 kV and 1 one future 275 kV.

CO-GEN POWERED

Available Petronas gas piepeline along boundary of Delapan E2 for potential energy-efficient cogeneration.



GROWING SEWERAGE SYSTEM

Providing a forward-thinking sustainable solution for growing occupancy needs. Industrialized sewage system designed with scalability in mind, this innovative infrastructure lays the foundation for accommodating future expansions.



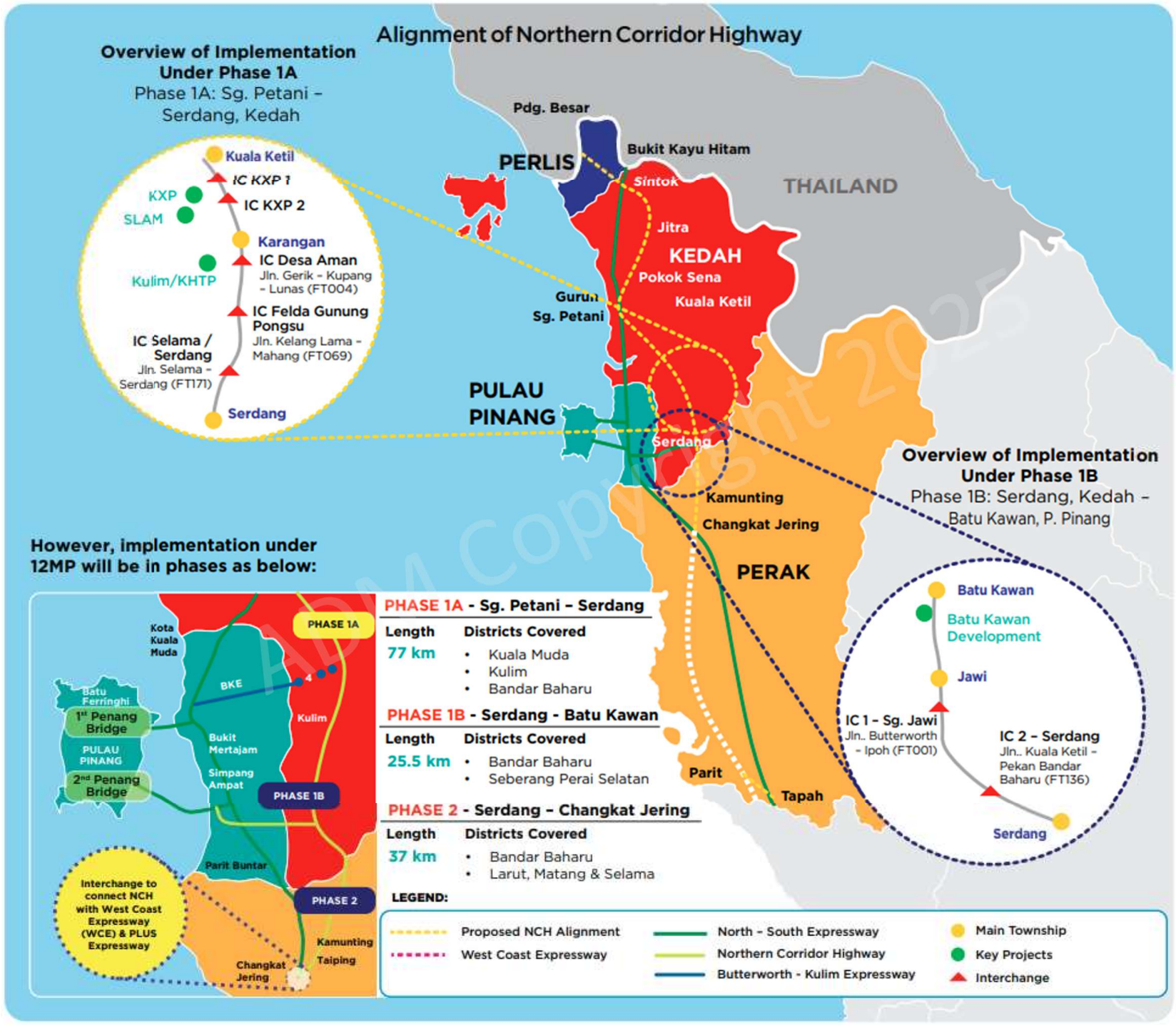
EXPANSIVE INTERNET CONNECTIVITY

Expanding broadband networks, like the Broadband Penetration Enhancement Plan in Perlis and Kedah, is crucial for efficient communication in business and social settings, supporting the development of a knowledge-based digital economy.

NORTHERN GATEWAY area ADM

ROAD CONNECTIVITY

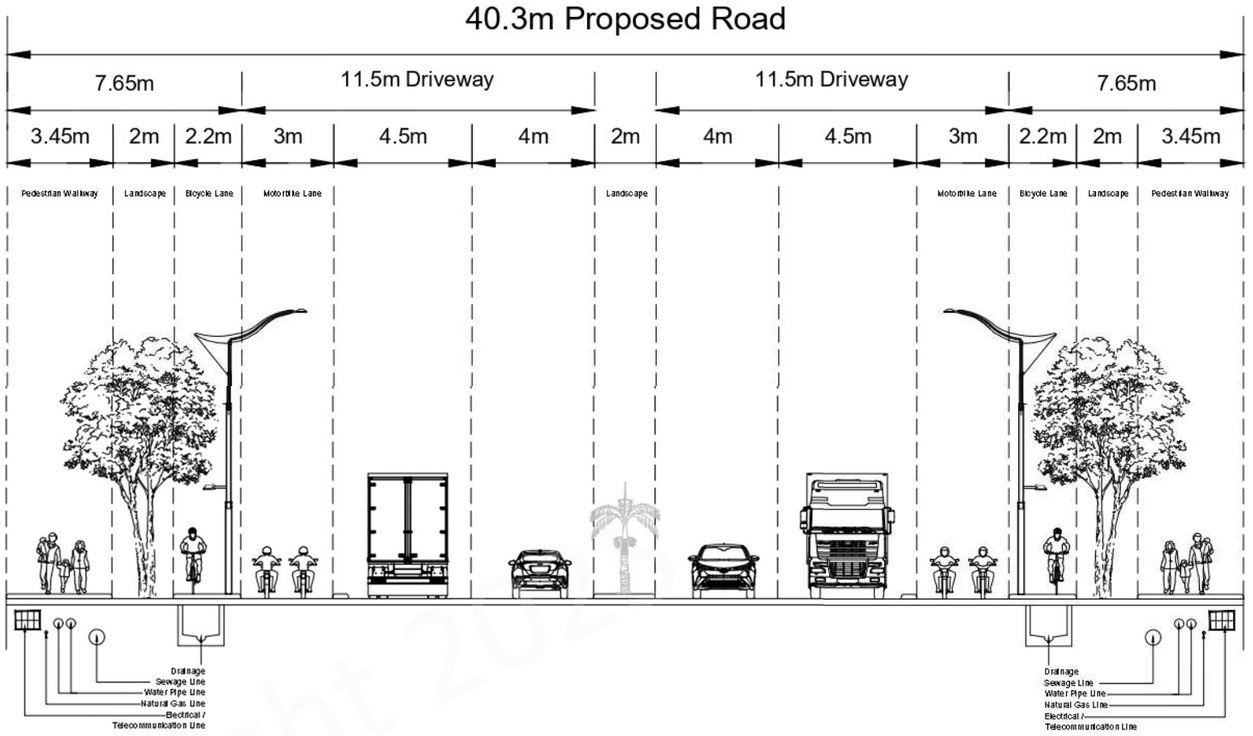
NORTHERN CORRIDOR HIGHWAY

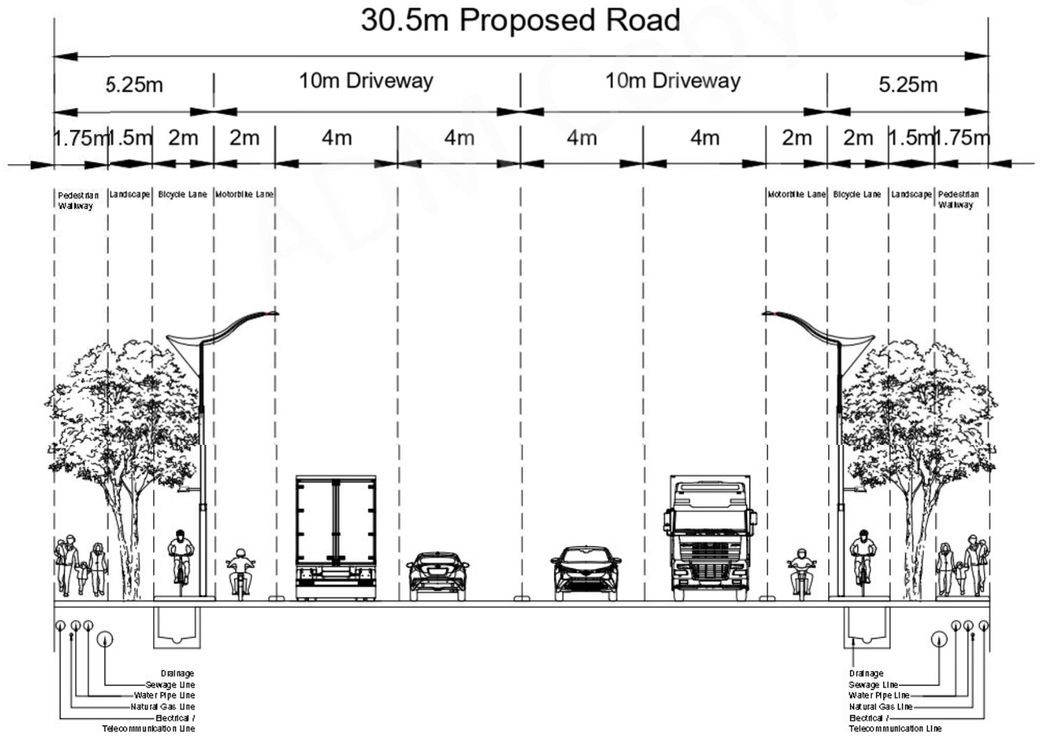


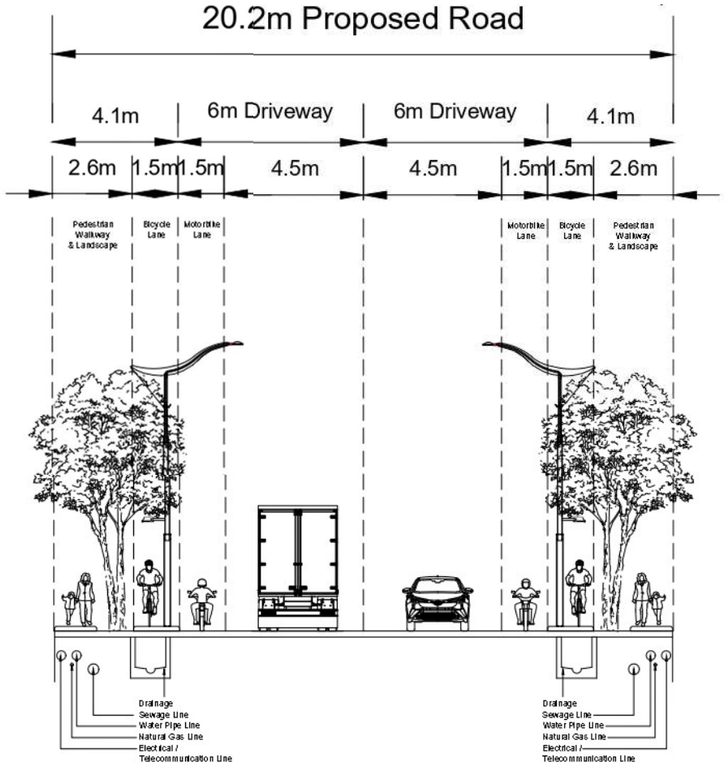
(NCER)

ROAD CONNECTIVITY

ROAD SECTION







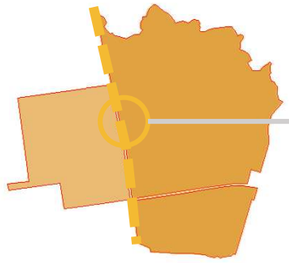
NORTHERN GATEWAY area ADM

INDUSTRIAL CORRIDOR

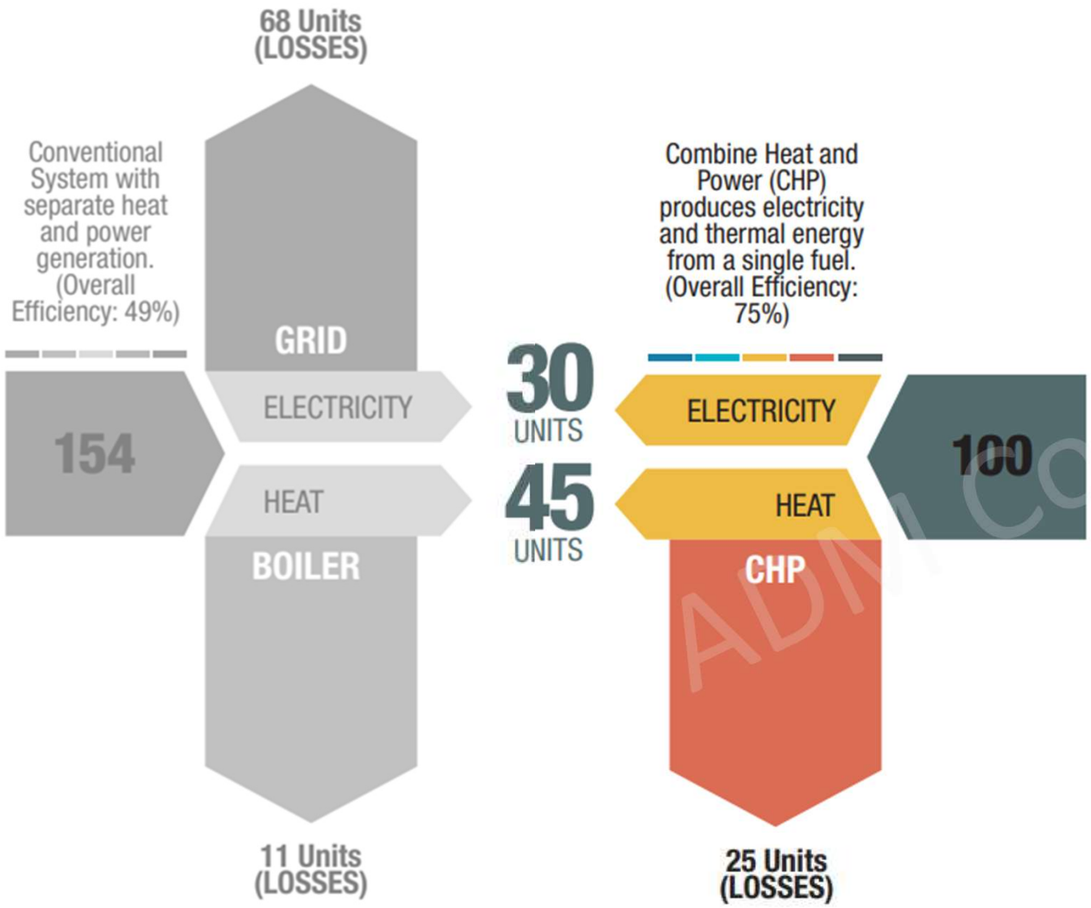
PETRONAS GAS PIPELINE

CO-GENERATION

Uninterrupted power with long-term sustainability



DELAPAN EAST



Overall Efficiency Comparison between Conventional System and Cogeneration

Suruhanjaya Tenaga (Energy Commission)

Legend

Gas Pipeline Network

UP TO 75% EFFICIENCY

Enhance the effective utilization of energy sources by achieving over a 40% reduction in primary energy consumption

REDUCE EMMISION

Decrease carbon dioxide (CO_2) emissions by utilizing less fuel and mitigating losses in transmission and distribution. This is achieved by generating electricity on-site or in close proximity to the loads

LOW WASTAGE

Minimize both the demand for electricity and the losses incurred during its transmission and distribution

HIGHER ROI

Enhance the financial success and competitive edge of the enterprise.

EXPONANTIAL SAVINGS

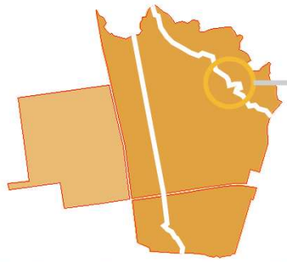
Minimized operational expenses accompanied by lower energy expenditures

ATTRACTING INVESTMENTS

Investing in energy-efficient technology for generation and harnessing renewable energy resources will create business prospects and spur growth.

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RIVER CORRIDOR



DELAPAN EAST

GREEN ECONOMY

Utilized the buffer into a trail to enhance visitors' experience.
Human centric design for sustainable community

ECOTOURISM

Minimize environmental impact of biodiversity park along the river. Create more job opportunities for locals

NATURAL COOLING WATER

Natural water supply water-intensive industries as cooling system or other manufacturing needs

SPONGE CITY READY

Cultivate urban water for flood ready industrial city to avoid natural disaster damages and contribute to urban development, leading to improved living standards

INNOVATION AND RESEARCH

Proximity to research institutions, educational facilities, and other industries can foster an environment conducive to innovation and research collaboration

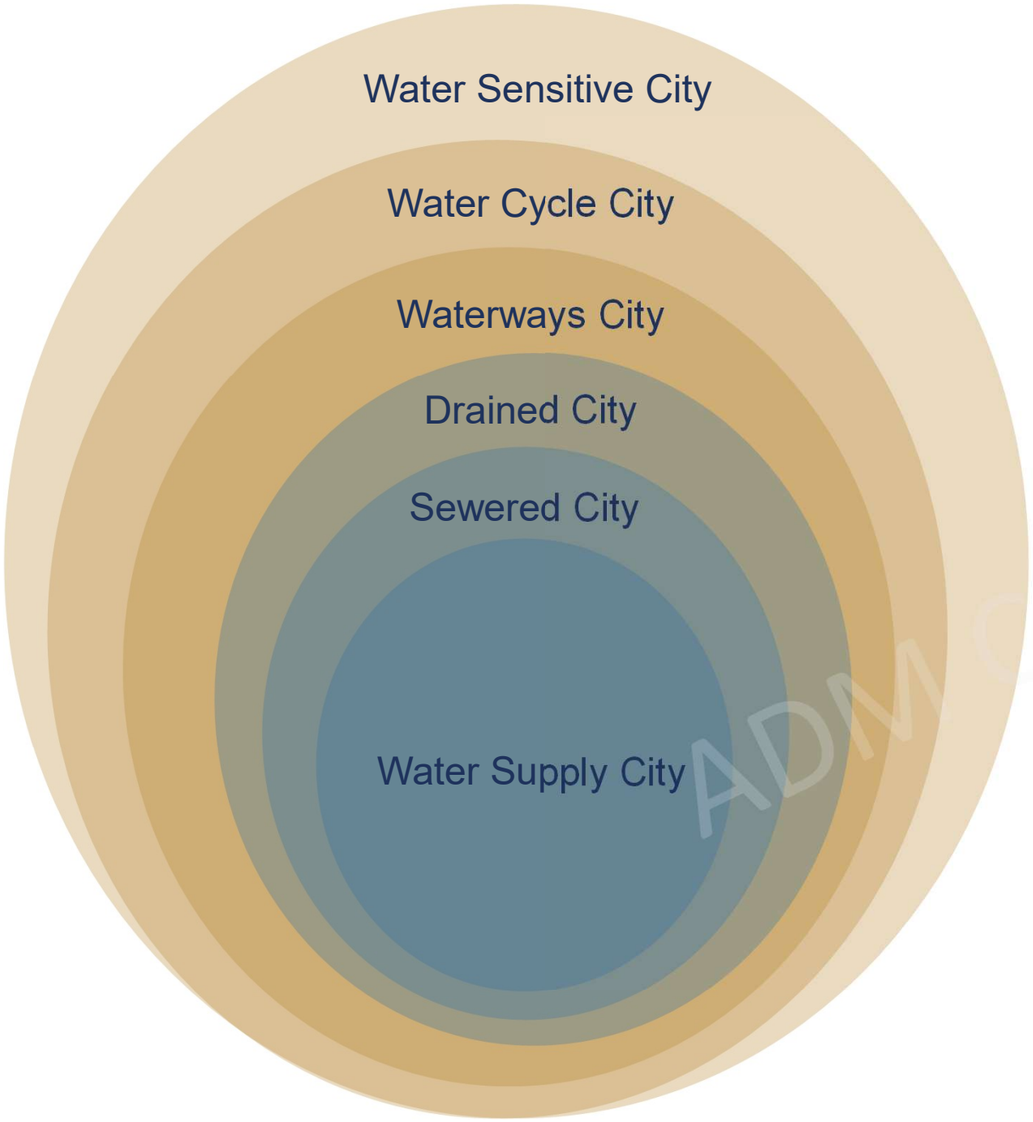


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NORTHERN GATEWAY area ADM

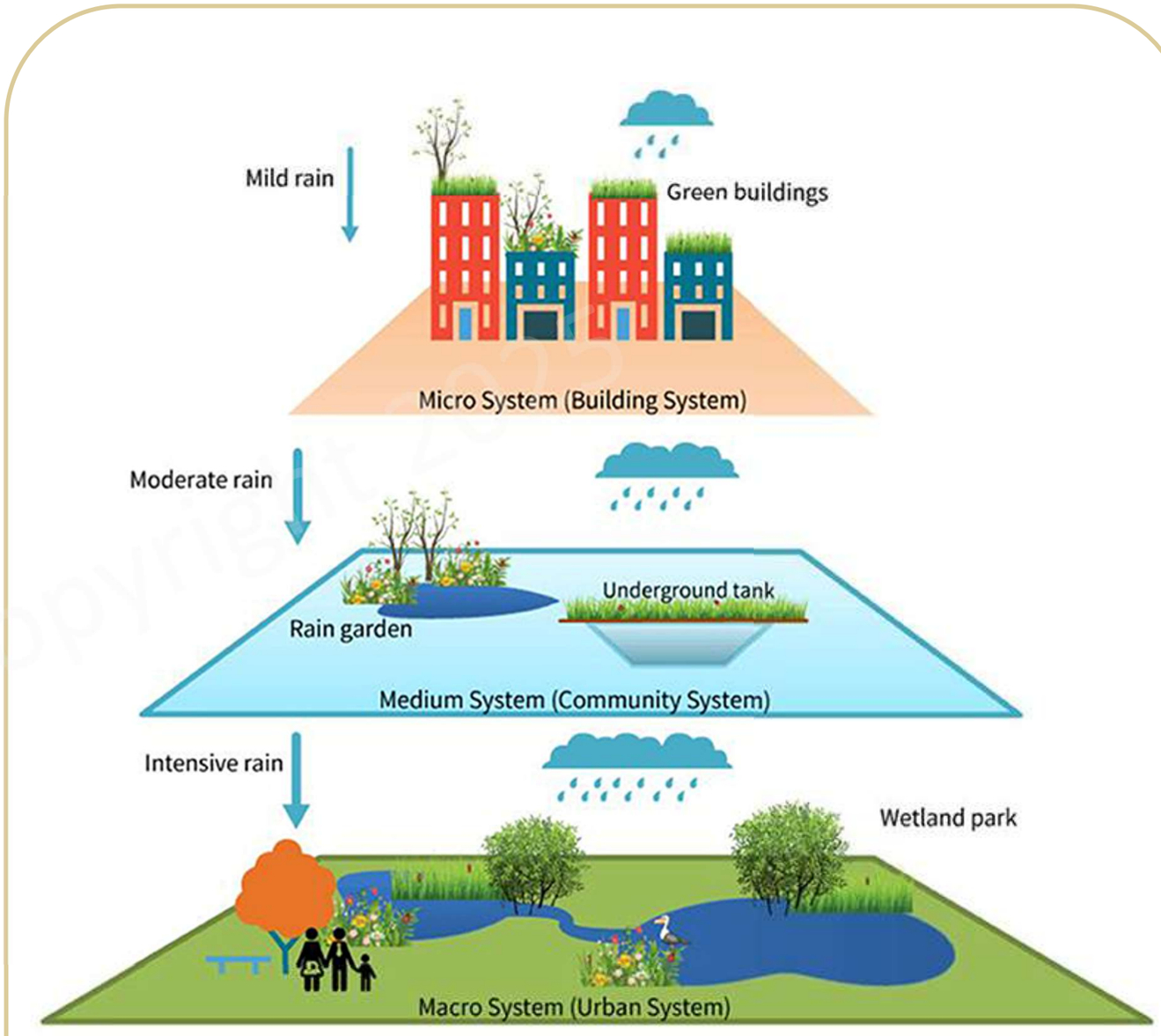
SPONGE CITY

RAINWATER HARVESTING WATER STORAGE FOR SERVER FARM



The roadmap of each step of urban water in Australia.

(ResearchGate)



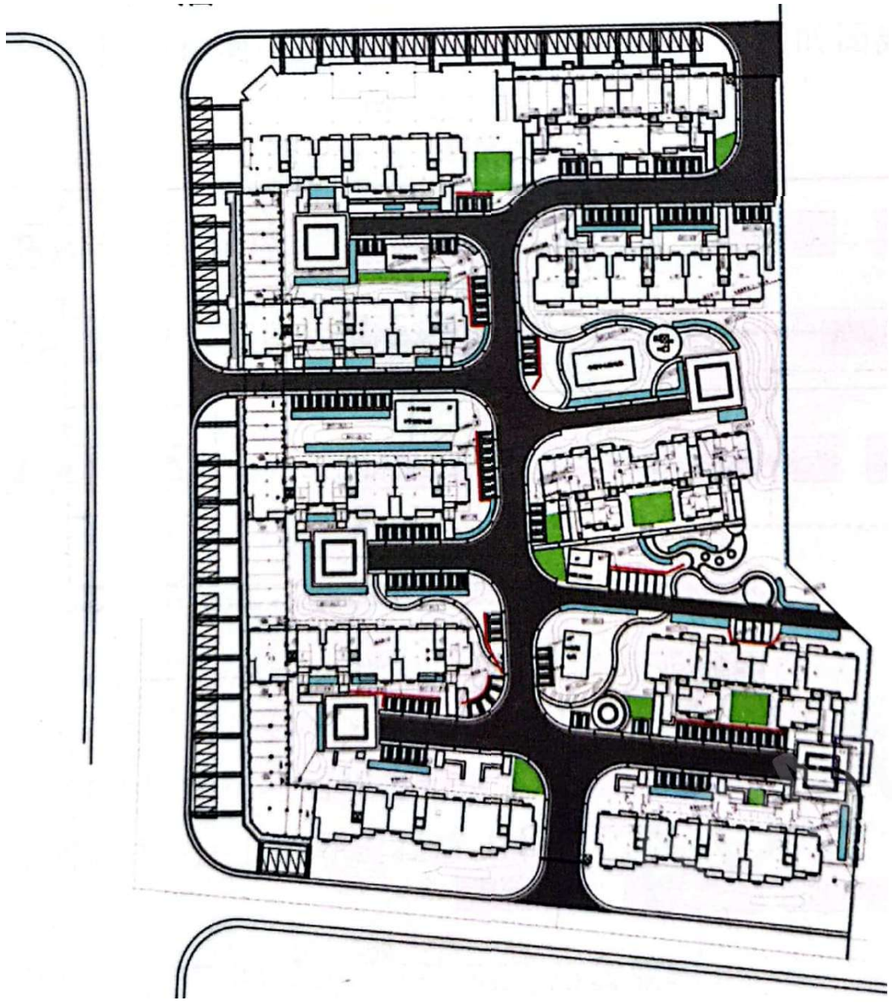
The Sponge City Program technical system in Soutwest China.

(The Case of Gui'an New District, Southwest China)

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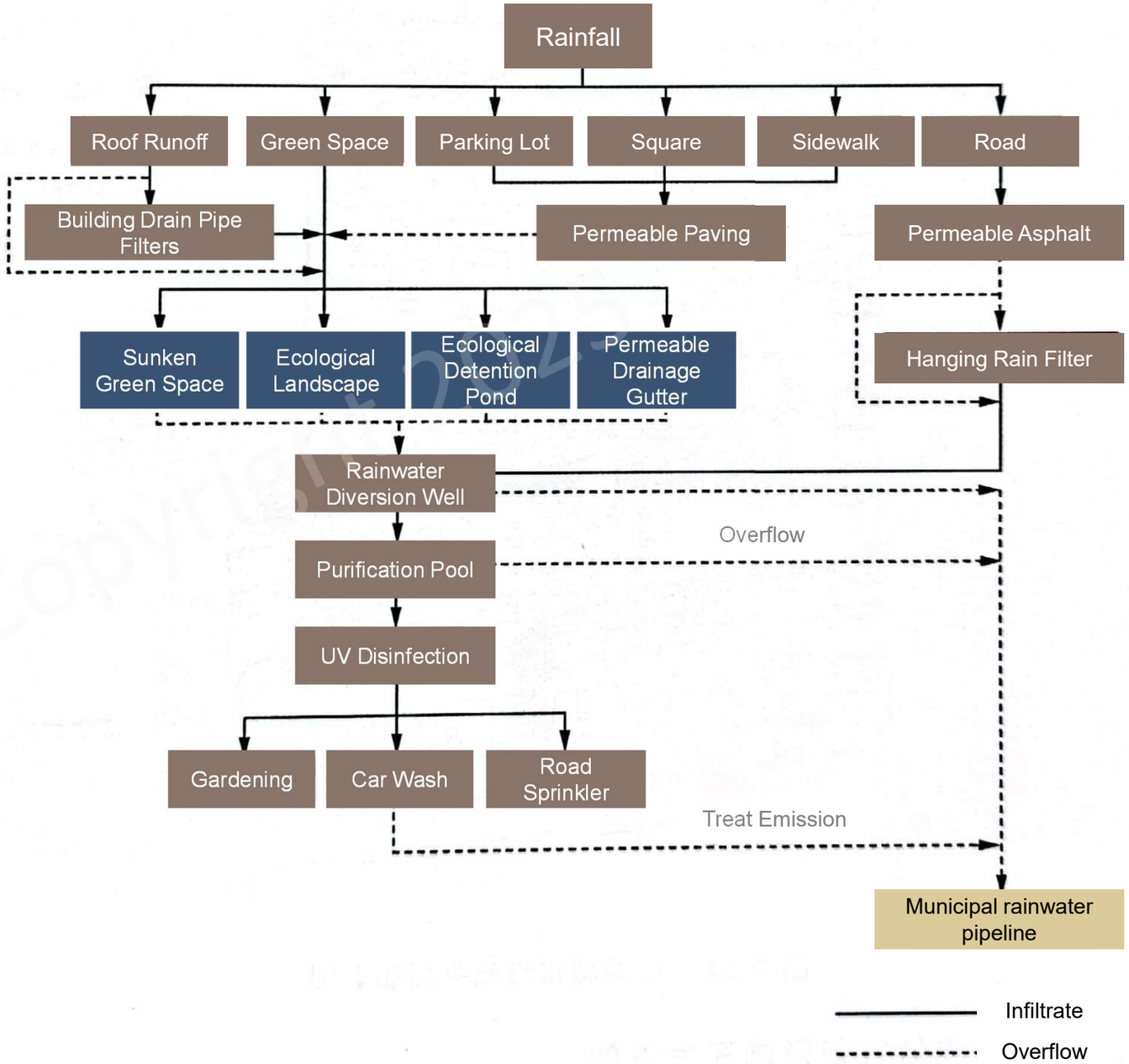
SPONGE CITY

ELEMENTS TO CONTRUCT A SPONGE CITY



Permeable asphalt pavement
Ecological detention pond
Sunken green space
Permeable parking lot
Pebble ditch
Adjustment and purification pool

Sponge city facility floor plan



Sponge city construction technology roadmap

(Design and Construction Management of Low Impact Development in Sponge City)

E2 MASTERPLAN

GUARD HOUSE OF INDUSTRIAL PARK

GBS AND SUPPORTING FACILITIES

SOLAR FARM AND ESG AWARENESS PARK

PETRONAS GAS PIPELINE

MAIN MANUFACTURING CLUSTER

TO / FROM IMMIGRATION COMPLEX

HYBRID INDUSTRIAL PARK

2ND GUARD HOUSE OF INDUSTRIAL PARK

FUTURE SERVER FARM CLUSTER

UTILITIES CLUSTER

TO / FROM CHANGLUN

N

E2 MASTERPLAN AERIAL VIEW

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E2 MASTERPLAN

LEGEND

MAIN MANUFACTURING CLUSTER	797 AC.
HYBRID INDUSTRIAL PARK	27 AC.
FUTURE SERVER FARM CLUSTER 1	144 AC.
FUTURE SERVER FARM CLUSTER 2	73 AC.
GBS AND SUPPORTING FACILITIES	86 AC.
SOLAR FARM AND EGS AWARENESS PARK	202 AC.
OTHERS	266 AC.

THAILAND

MALAYSIA

IMMIGRATION COMPLEX

E2

1,545.78 ACRES

TO / FROM IMMIGRATION COMPLEX

E1

NORTH-SOUTH EXPRESSWAY

TO / FROM FT277

TO / FROM FELDA BUKIT TANGGA AND UUM GATE

FELDA BUKIT TANGGA

D E L A P A N E A S T

N

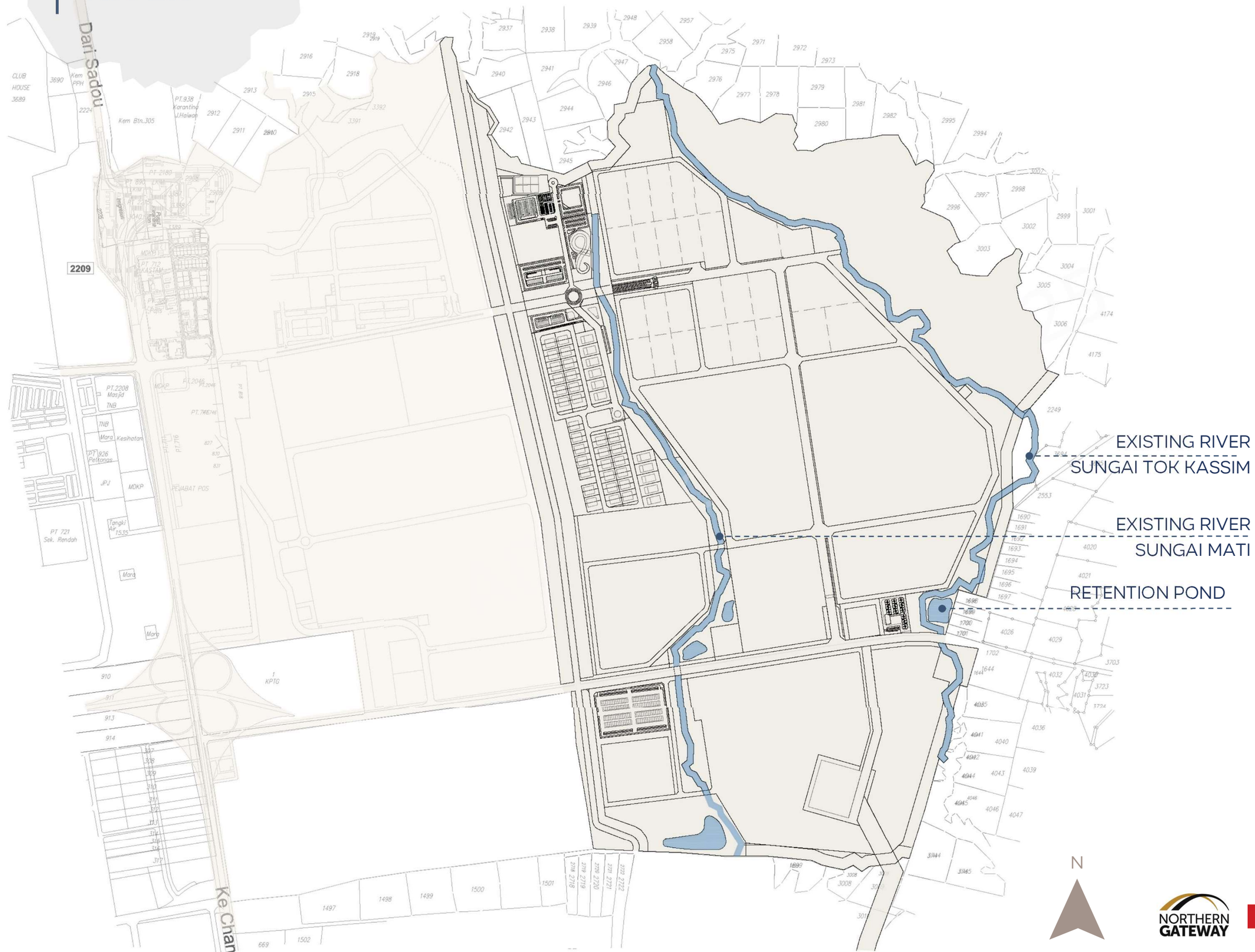
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NORTHERN GATEWAY area ADM

ROAD


Dairi Sadou
2209
IMMIGRATION COMPLEX
TO / FROM IMMIGRATION COMPLEX
NORTH-SOUTH EXPRESSWAY
TO / FROM FT277
132' MAIN ROAD ACCESS
100' SECONDARY ROAD
66' TERTIARY ROAD
TO / FROM FELDA BUKIT TANGGA AND UUM GATE
N

RIVER


Dari Sadou
2209
Ke Chan
EXISTING RIVER
SUNGAI TOK KASSIM
EXISTING RIVER
SUNGAI MATI
RETENTION POND
N

WATER SUPPLY



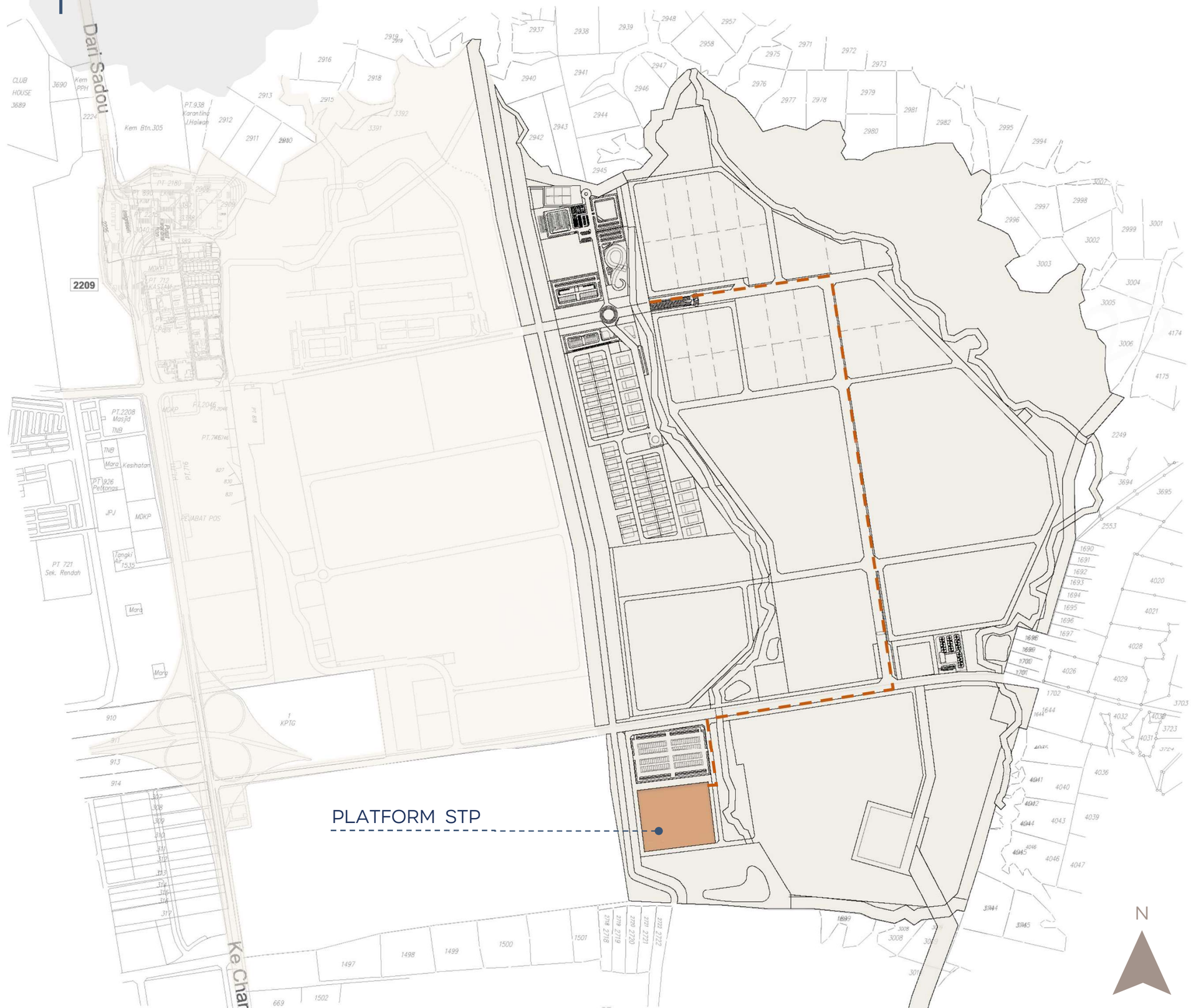
GREEN AREA


50M BUFFER ZONE
OPEN SPACE
50M BUFFER ZONE
N
Dairi Sadou
Ke Chan
2209
NORTHERN GATEWAY
area
ADM

ELECTRICAL SUPPLY



SEWERAGE



PHASING



PHASE 1 (P1)
- Manufacturing Plot 4-6
- Hybrid Park
- Commercial & Drive Thru 1
- Drive Thru 2
- CLQ1

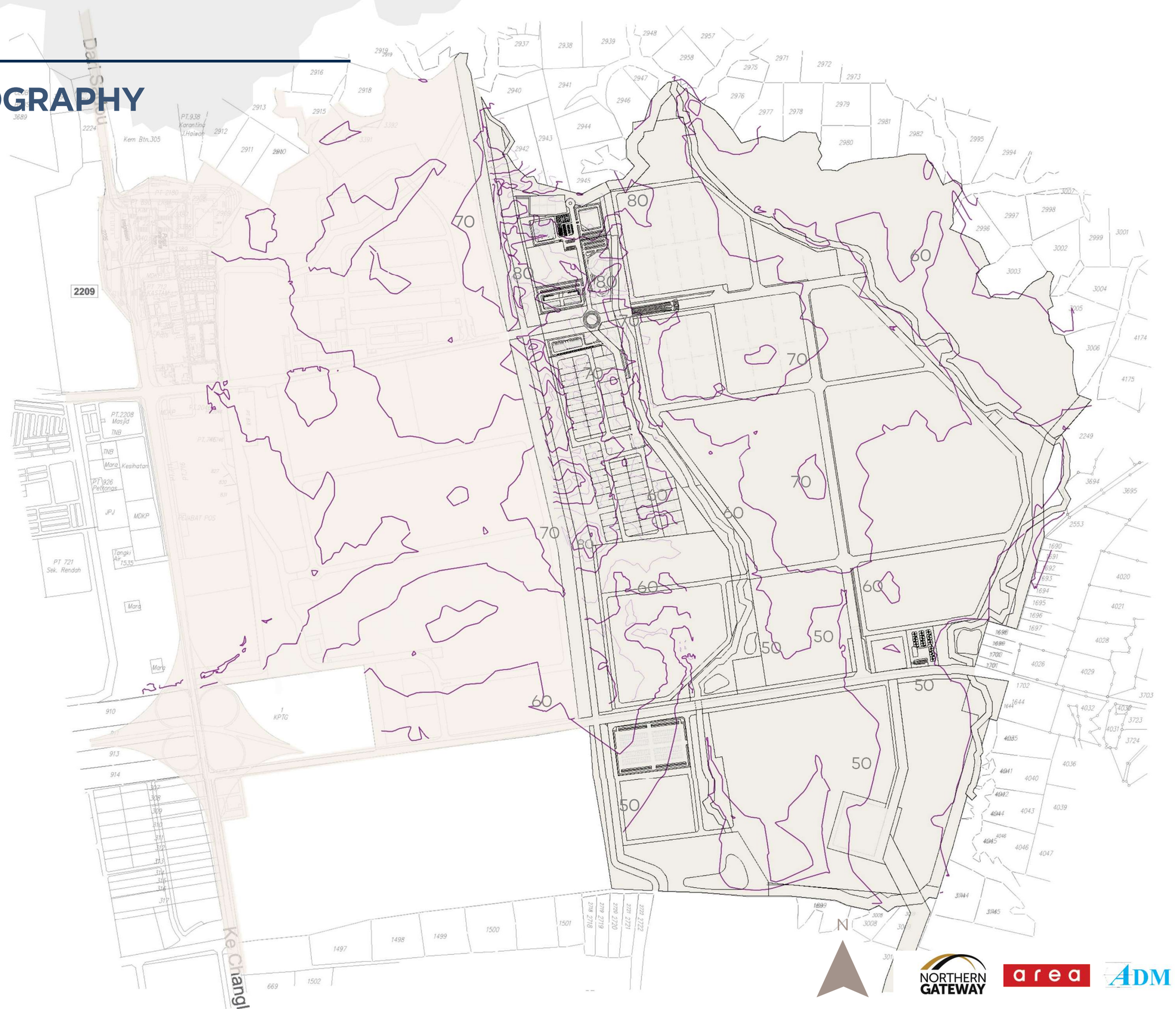
PHASE 2 (P2)
- Plot 7 & 8

PHASE 3 (P3)
- Plot 9 - 12, CLQ 3

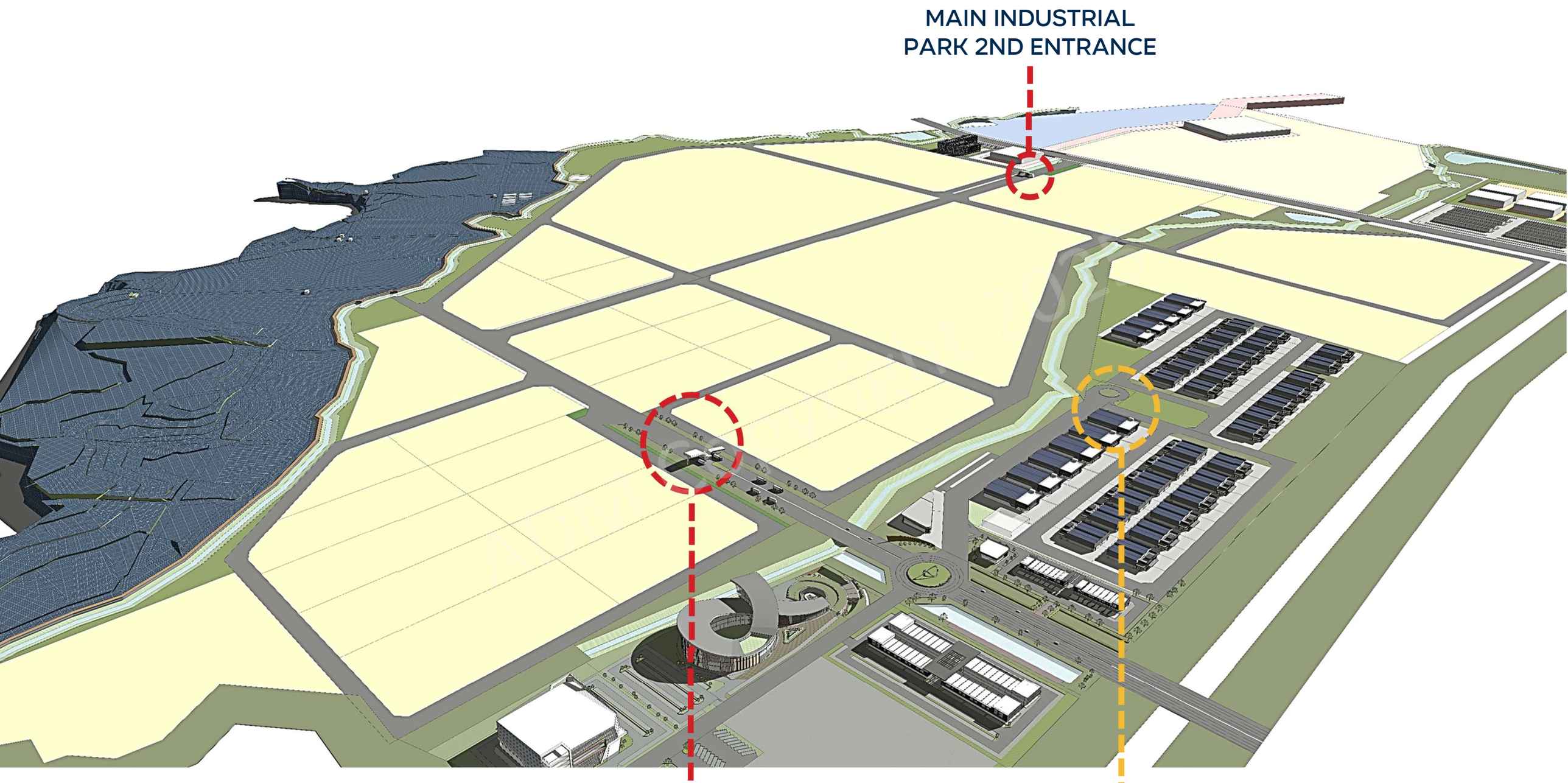
PHASE 4 (P4)
- Plot 1 - 3

PHASE 5 (P5)
- Future Server Farm Cluster 1 & 2

TOPOGRAPHY


Dari Sg Ujong
Kem Btn.305
PT.938 Karantina J.Haiwan
PT.2208 Masjid
TNB
Mara Kesihatan
PT.926 Pertanian
JPJ
MDKP
PT 721 Sek. Rendah
Tangki Air 1535
Mara
PEMBAT POS
1 KPTG
2209
Ke Changlun
80
70
60
50
N

INDUSTRIAL PARK CLUSTERS

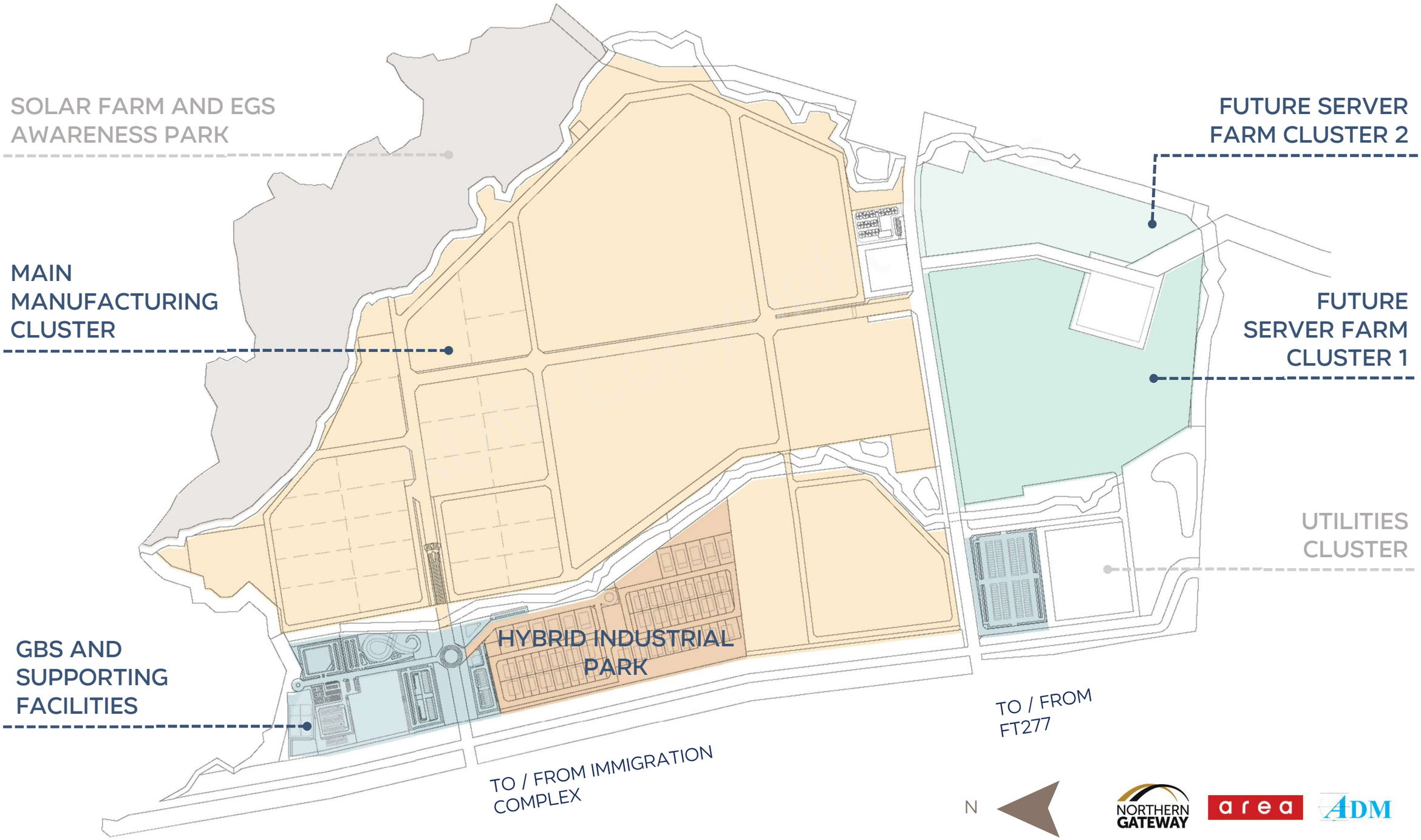


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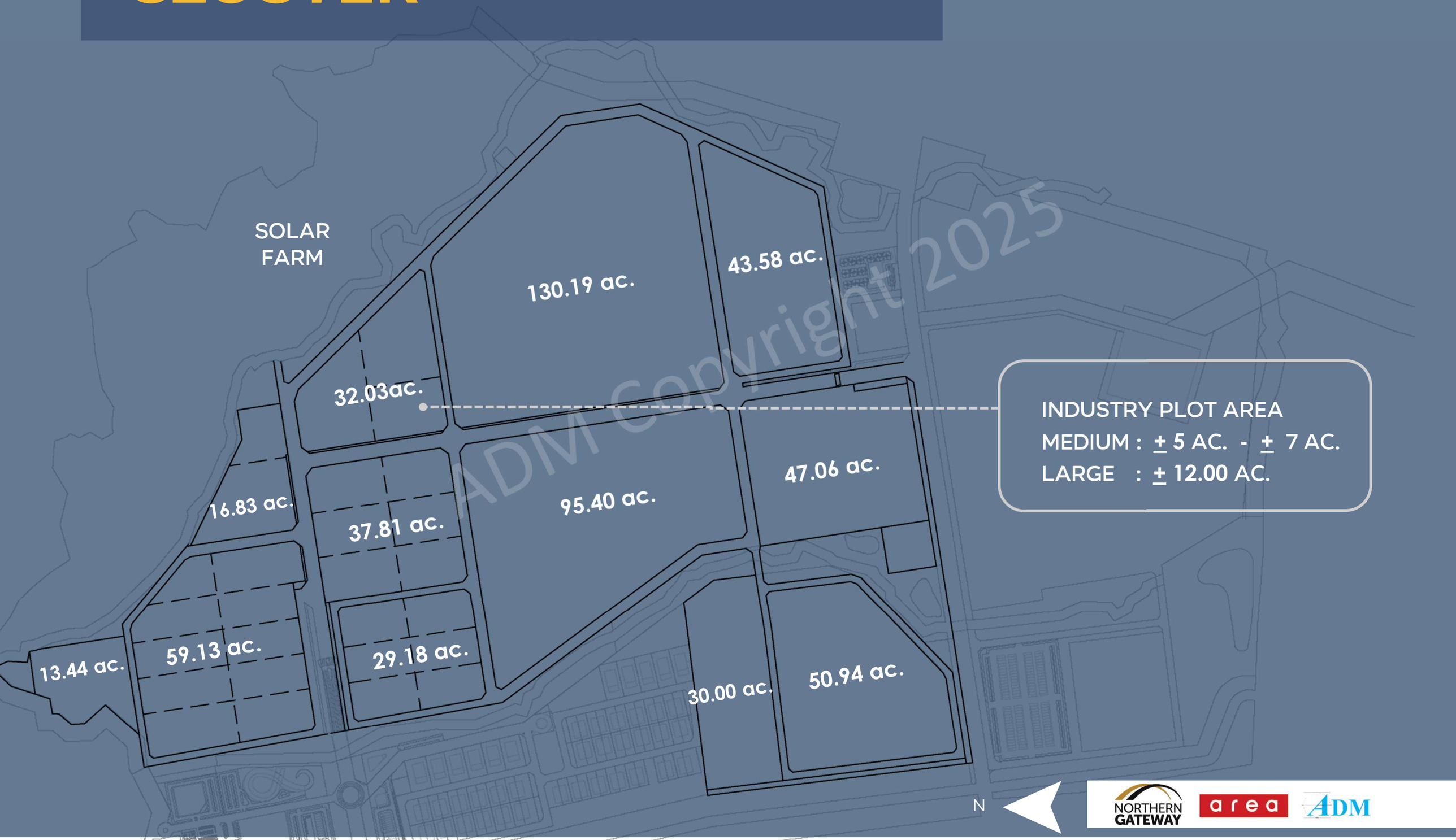
INDUSTRIAL PARK CLUSTERS

LEGEND

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OTHERS	266 AC.



MAIN MANUFACTURING CLUSTER



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FUTURE SERVER FARM CLUSTER



DATA SERVER COOLING SYSTEM

NATURAL COOLING WATER STORAGE

GLOBAL DATA CENTER ELECTRICITY USE

1 TO 1.3%

GLOBAL ELECTRICITY DEMAND

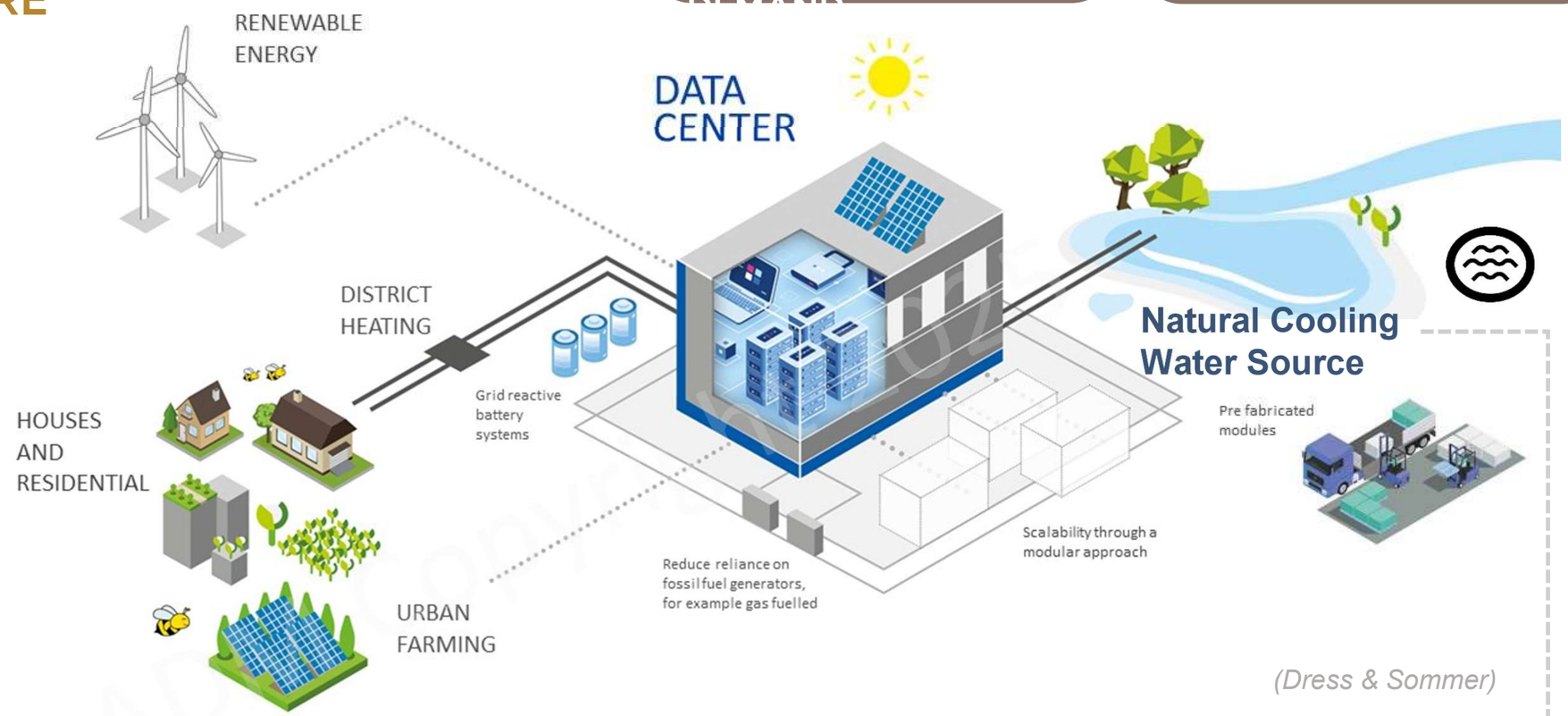
CLOUD COMPUTING

A DIGITAL TRANSFORMATION IN IR 4.0

WAVE OF THE FUTURE

Top tech industries are moving into water cooling system to sustain the growing industry.

Zane Ball from Intel highlighted the increasing emphasis on immersion cooling and collab with cooling vendors to set standards for more accessible immersion cooling technology.



(Dress & Sommer)

WATER POSITIVE

Sufficient supply of water demandfrom natural water source to cool data center.

EFFICIENT COOLING

Colder natural water efficiently cools data center's infrastructure, helping maintain optimal operating temperatures

SUSTAIN ABILITY

Minimizes the data center's carbon footprint and making data centers more eco-friendly.

COST ENERGY EFFICIENT

Reduce the energy consumption compared to traditional cooling systems while lowers operational costs.

ADS COPYRIGHT

NORTHERN GATEWAY area ADM

HYBRID INDUSTRIAL PARK



PHASE 1

HIGH DEMAND MODELS

3-STOREY DETACHED (6 Units) — A

2-STOREY SEMI-DETACHED (5 Units) — B

3-STOREY SEMI-DETACHED (62 Units) — C

0 10

N

Legend	Type	Unit	Land Area				Building Footprint		Built-up Area	
			m	ft	sqm	sqft	m	ft	sqm	sqft
A	2-Storey Detached	6	53.00 X 90.00	174 X 295	4,770.00	51,343	32.00 X 55.00	105 X 180	2,240.00	24,111
B	2-Storey Detached	5	50.00 X 100.00	164 X 328	5,000.00	53,819	30.00 X 60.00	98 X 197	2,250.00	24,218
C	3-Storey Semi-Detached	24	27.50 X 70.00	90 X 230	1,925.00	20,720	18.30 X 45.00	60 X 148	1,372.50	14,773
		38	27.50 X 72.00	90 X 230	1,980.00	21,313	18.30 X 45.00	60 X 148	1,372.50	14,773

ADM

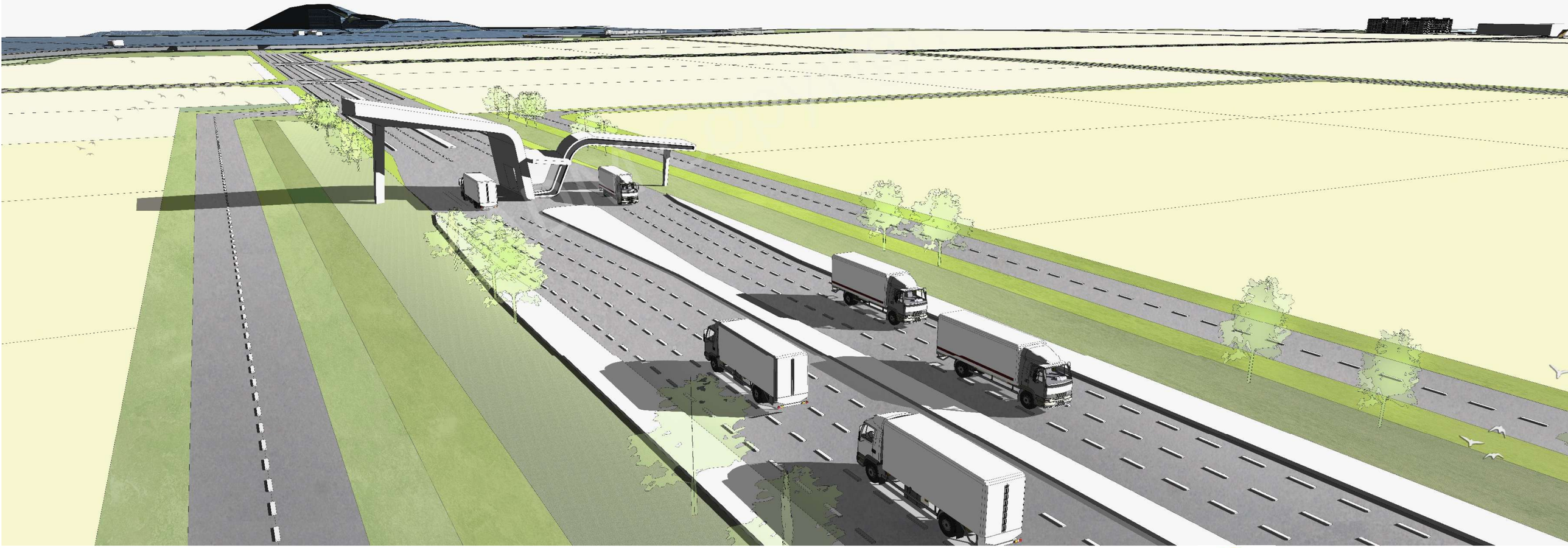
NORTHERN GATEWAY area ADM



GBS AND SUPPORTING FACILITIES

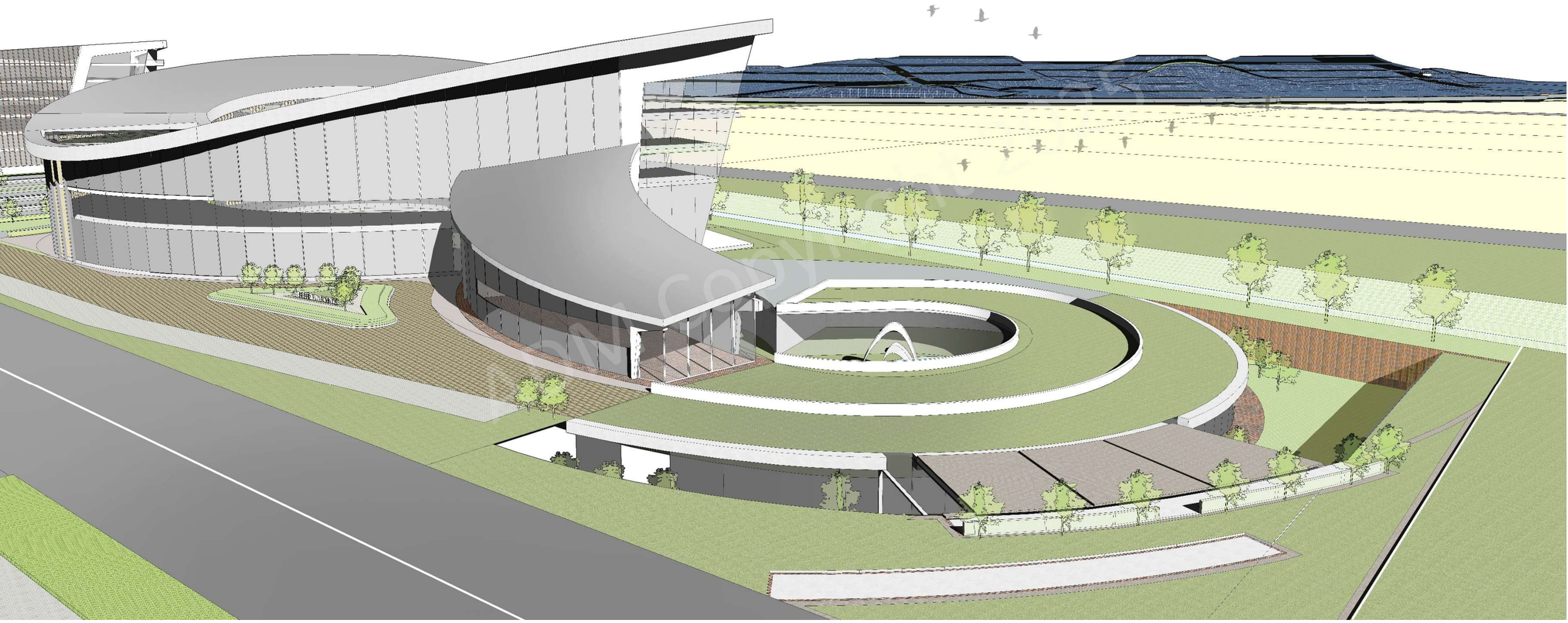
ENTRANCE STATEMENT





GBS, SALES GALLERY, VISITORS' EXPERIENCE CENTRE

OVERALL FACILITY



SALES GALLERY

FUTURISTIC DISPLAY AND PRESENTATION





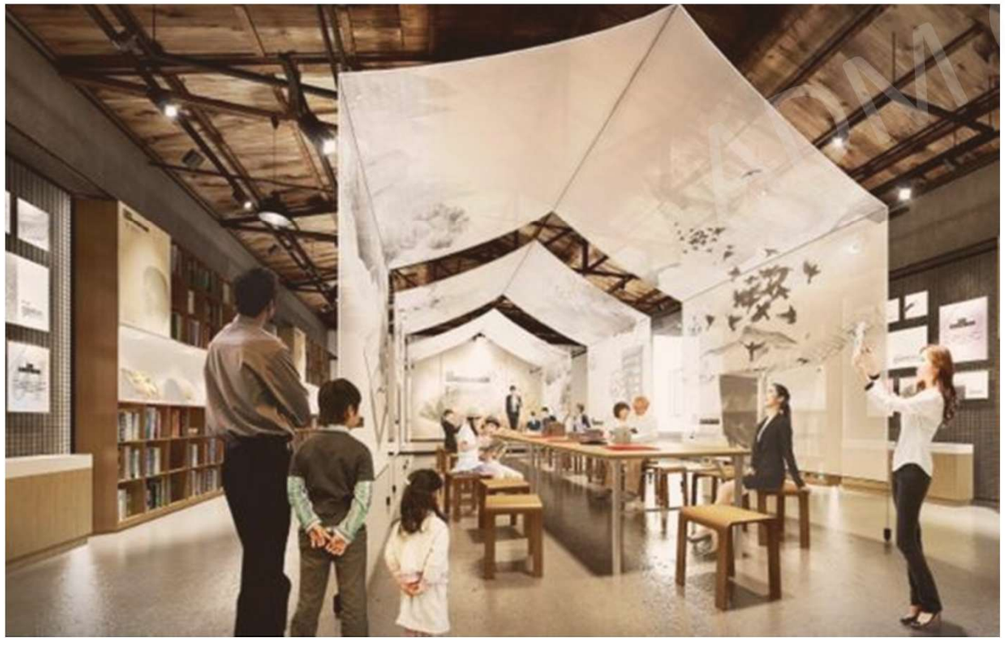
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VISITORS' EXPERIENCE CENTRE

IMMERSIVE HISTORY & CULTURAL EXPERIENCE







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TVET

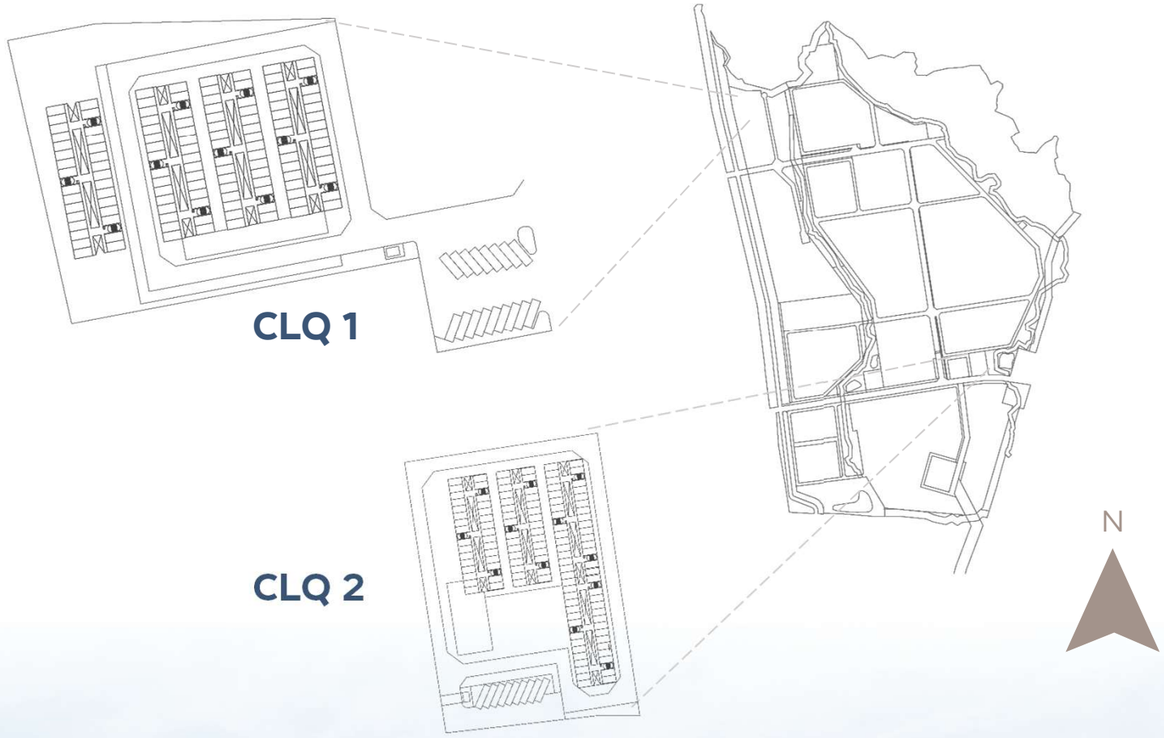
TECHNICAL AND VOCASIONAL EDUCATION TRAINING



NORTHERN GATEWAY area ADM

CENTRALISED LIVING QUATERS (CLQ)

SUFFICIENT ACCOMMODATION FOR WORKERS LIVING



DORMITORIES

6 pax / unit

31 units / floor

Approx. 750 pax / block

FOR ILLUSTRATION PURPOSE ONLY

Copyright

DELAPAN
LINEAR PARK

DELAPAN LINEAR PARK

AN ENVIRONMENTAL SUSTAINABLE GREEN TRAIL

A BENCHMARK FOR GREEN MANAGED INDUSTRIAL PARK WITH EDU-TAINMENT CONCEPT

DELAPAN Linear Park establishes a connection between the public and the managed industrial park, with a green loop that wraps around the core industrial zone – creating edu-tainment green pockets along the trail.

With a focus on educational yet entertaining approach, the trail and the green pockets with riverfront setting offer agrivoltaics farming and farm-to-table dining experience that transform the green spaces into dynamic and productive landscape which advocate the co-existence of Industry 5.0 and green sustainable living.

ENVIRONMENTAL Raise Public Awareness of ESG

RESILIENCE Flood-proofing in response to Climate Change

SMART TECH Interactive AI Park Management



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NORTHERN GATEWAY area ADM

DELAPAN LINEAR PARK

RIVER CORRIDOR

GREEN ECONOMY

Utilized the river reserve as a trail to enhance visitors' experience. Human-centric design for sustainable living

ECOTOURISM

Promote environmental impact of park biodiversity along the river. Create more job opportunities for locals.

WATER SENSITIVE URBAN DESIGN

Cultivate urban water for flood mitigation to avoid natural disaster damages and contribute to water conservation, leading to improved living standards

INNOVATION AND RESEARCH

Proximity to educational facilities and other hi-tech industries can foster an environment conducive for innovation and research collaboration



NORTHERN GATEWAY area ADM

DELAPAN LINEAR PARK

ZONE MAPPING

PUBLIC TRAIL





INTERACTIVE SCULPTURE





BIOSWALE
RAINWATER HARVESTING





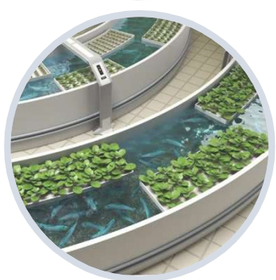
RIVER FRONT CONTAINER



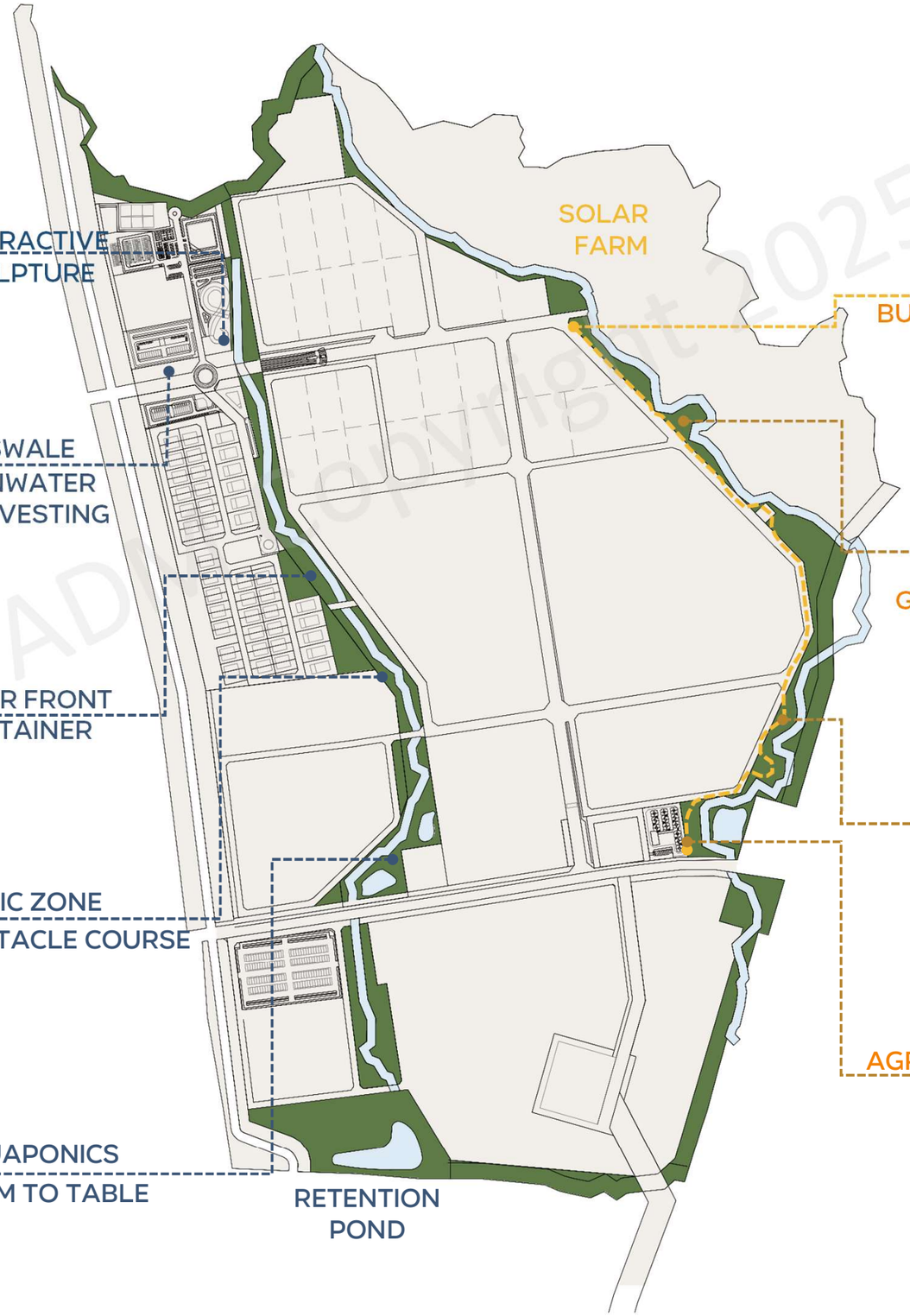


PICNIC ZONE
OBSTACLE COURSE





AQUAPONICS
FARM TO TABLE



GUIDED TRAIL

GUIDED BUGGY TRAIL





BICYCLE POWERED GENERATOR





SMART JOGGING TRACK





AGRIVOLTAICS FARMING





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DELAPAN LINEAR PARK

RIVERFRONT REST & RECREATION (R & R)



Series of community green pockets lined up along public trail

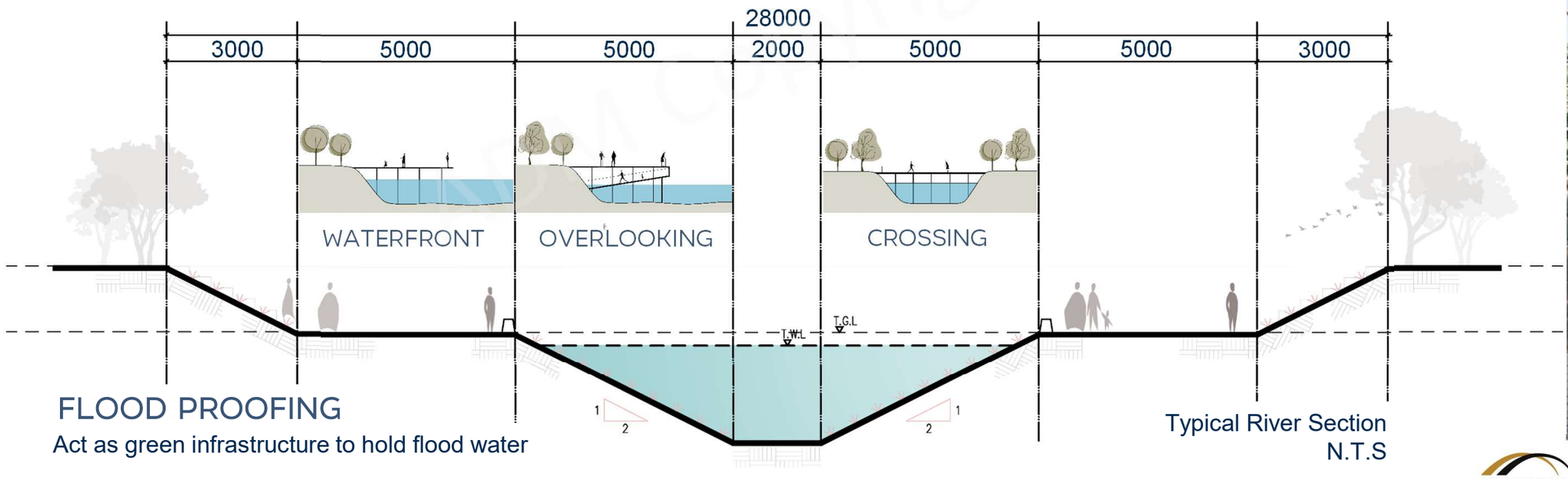


F&B KIOSK

PICNIC ZONE



OBSTACLE COURSE



FLOOD PROOFING

Act as green infrastructure to hold flood water

Typical River Section
N.T.S

NORTHERN GATEWAY

area

ADM

DELAPAN LINEAR PARK

GREEN ENERGY FARM

SOLAR FARM

Adopting renewable energy and an anchor role for future sustainable developments



01 AGROTOURISM

Create visitor experience and learning new innovative agriculture. Boosting the local economy by increasing demand for services like accommodation, food, and transportation.

02 AGRIBUSINESS

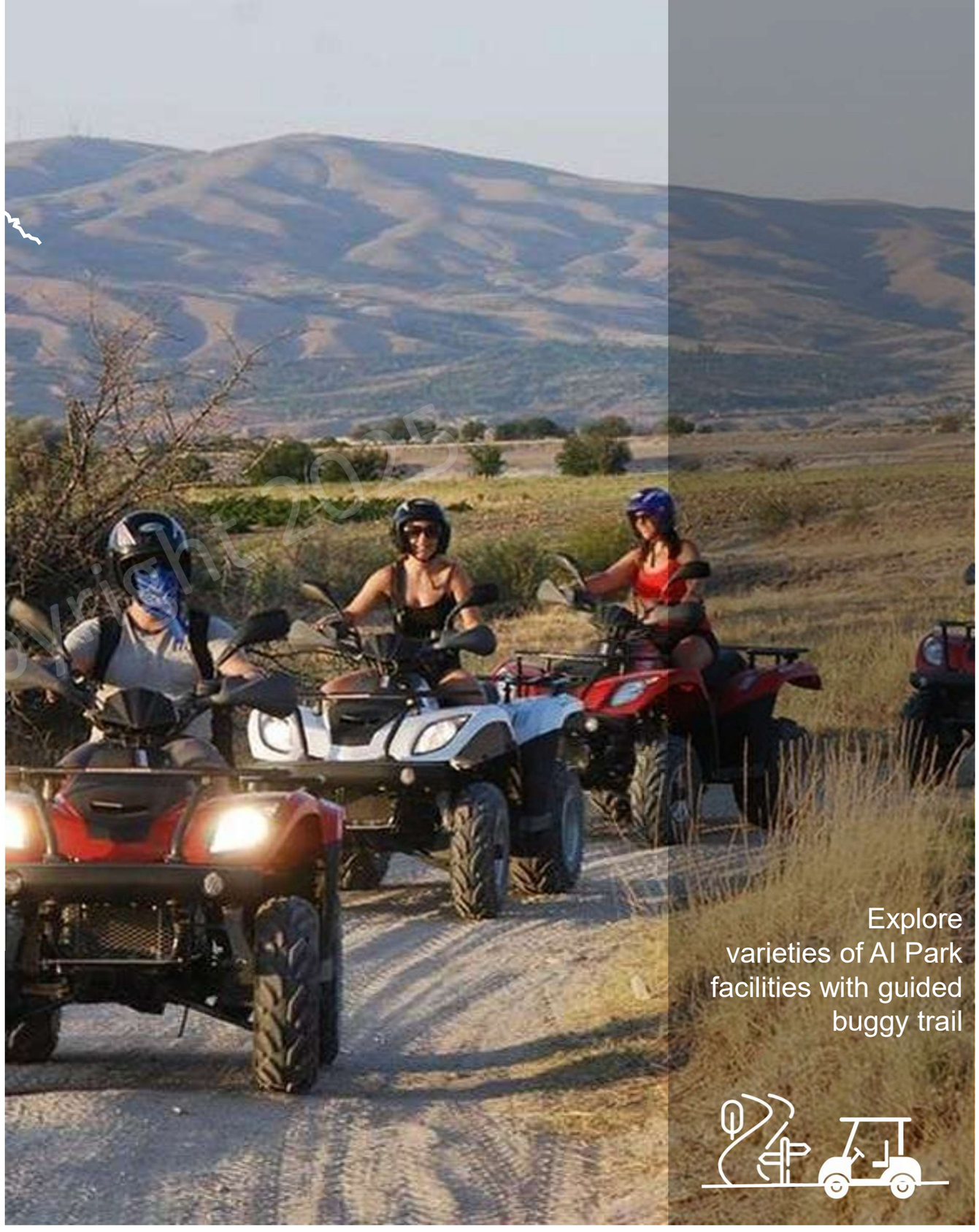
A nucleus farm provides technical training to satellite farms, enhancing processes, and using strategic inputs to elevate farming along the value chain. This addresses challenges, promotes competitiveness and sustainability, and encourages the adoption of modern agricultural practices for higher-value produce.



DELAPAN LINEAR PARK

GUIDED BUGGY TRAIL





Explore
varieties of AI Park
facilities with guided
buggy trail

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NORTHERN GATEWAY area ADM

DELAPAN LINEAR PARK

POWER EXCHANGE (POCKET PARK)

Harvest human energy as we stepping and jumping on reactive panels and transfer it into power to activate the playground

REACTIVE PANEL

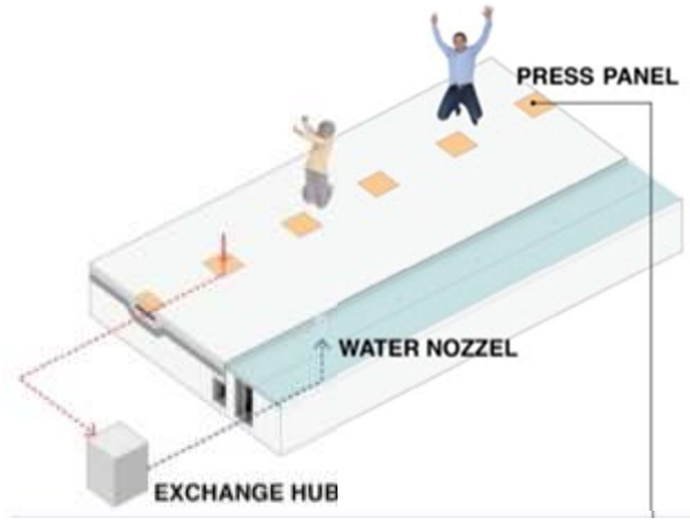
A module design supported by hi-tech experts to ensure the panel performance is predictable when it is triggered

GLOW AT NIGHT

Power will be collected and transform into light energy to light up the park at night

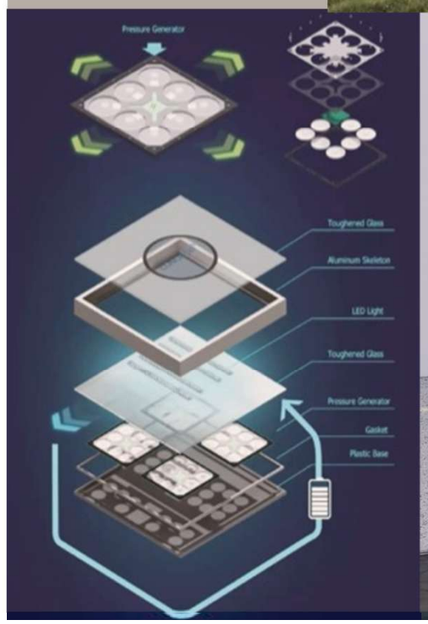
RWH WATER STORAGE

Reuse stormwater, creating a self-sustainable low-carbon ecological cycle











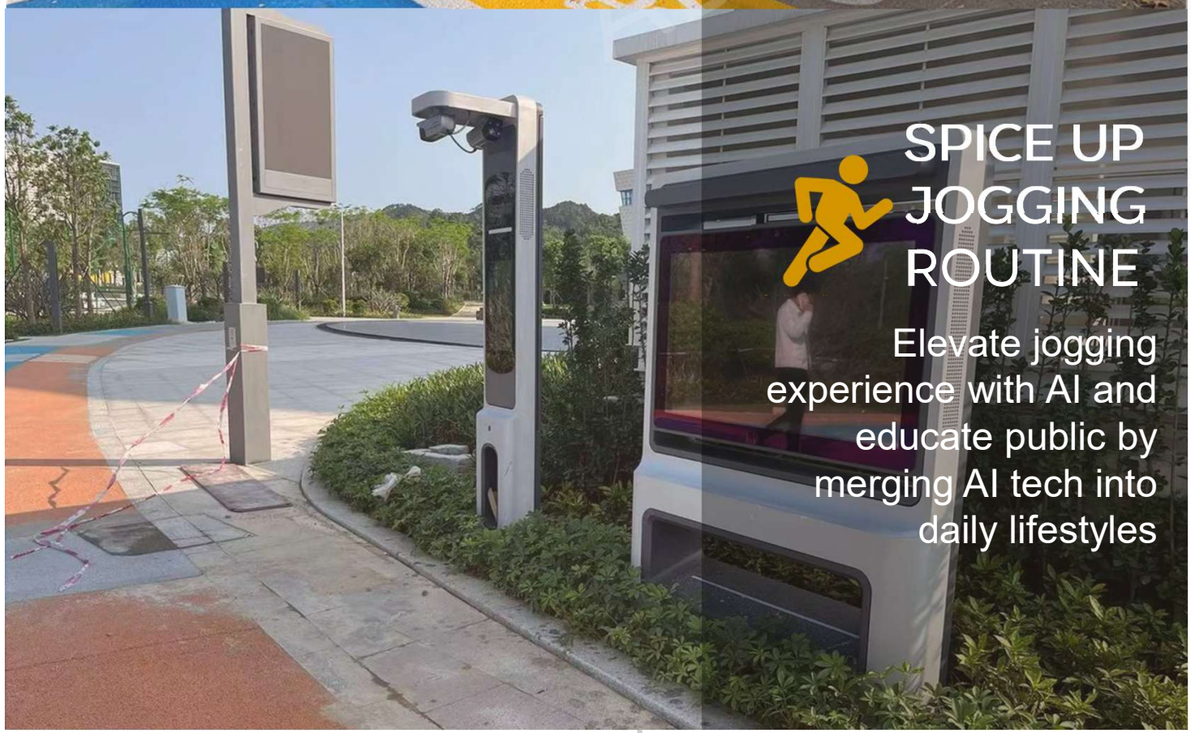
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SMART JOGGING TRACK (POCKET PARK)

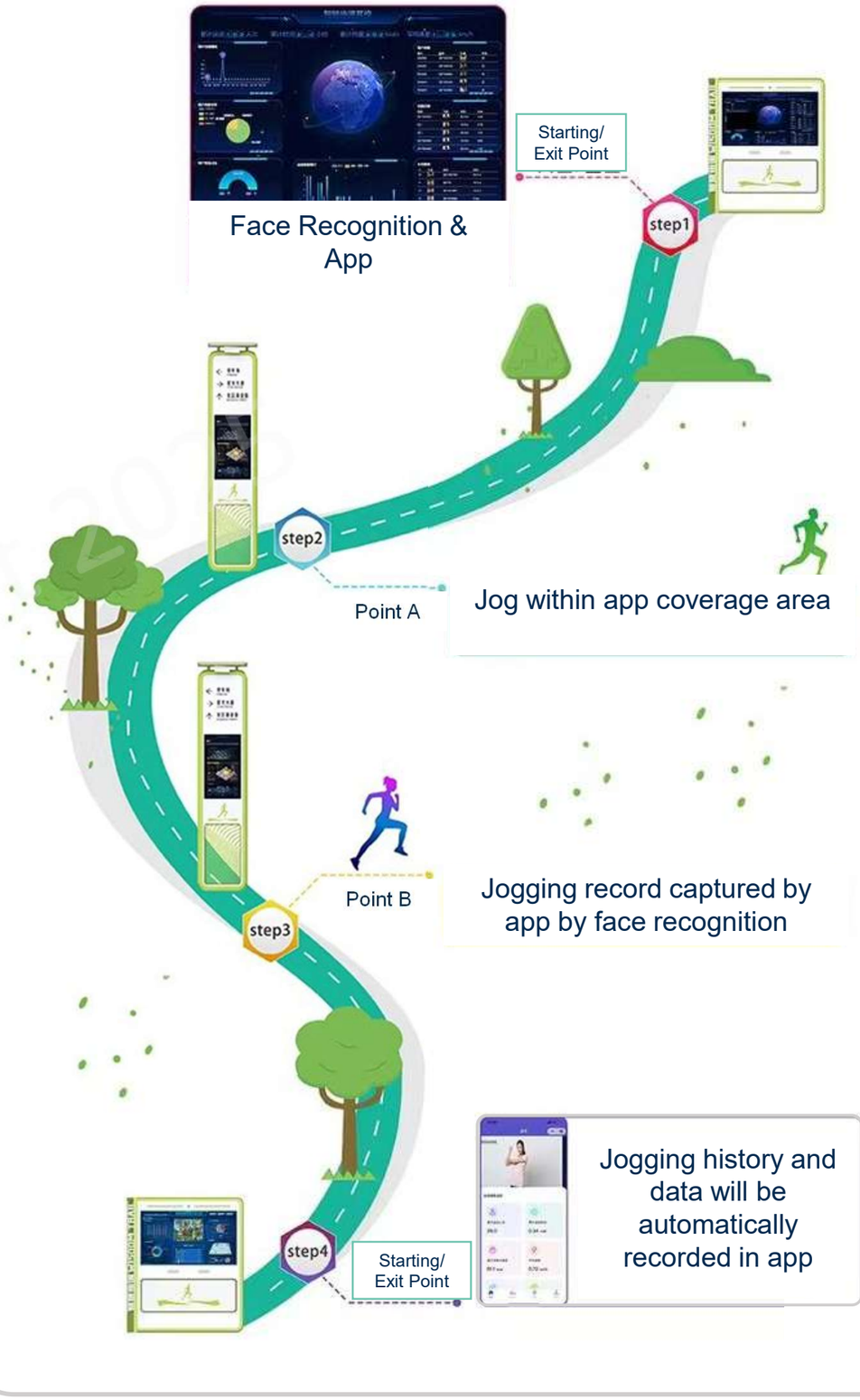


(Daning Park, China on the smarter track)



SPICE UP JOGGING ROUTINE

Elevate jogging experience with AI and educate public by merging AI tech into daily lifestyles



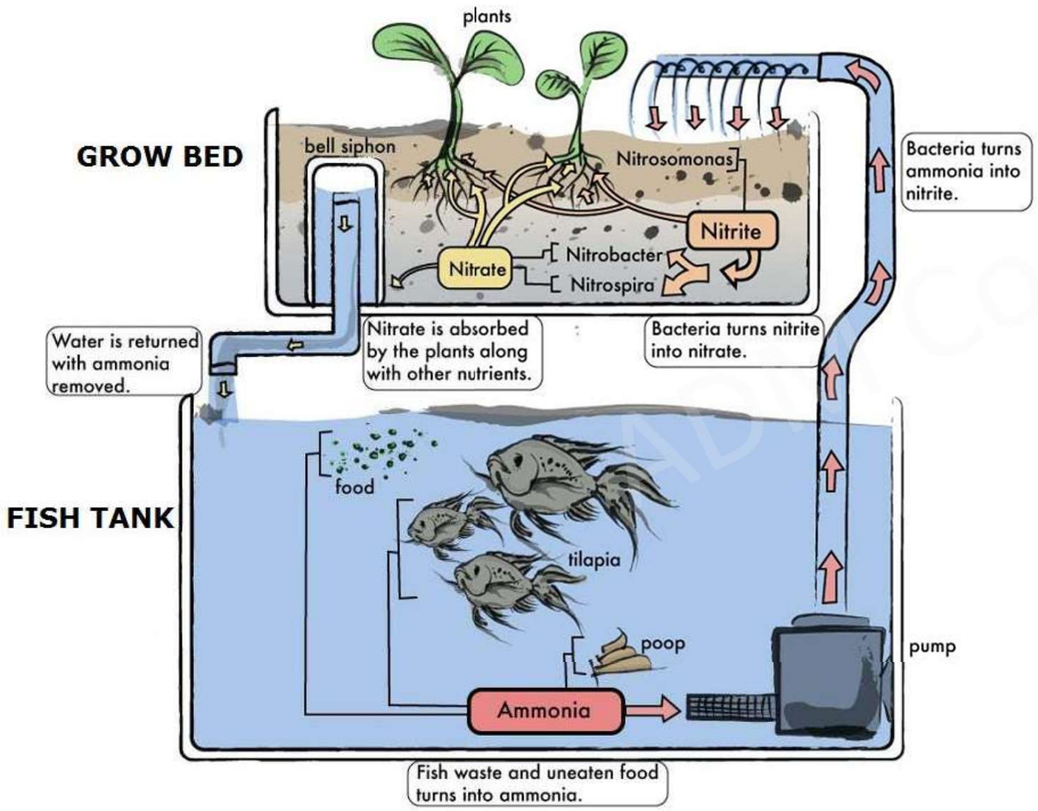
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DELAPAN LINEAR PARK

AQUAPONICS (POCKET PARK)

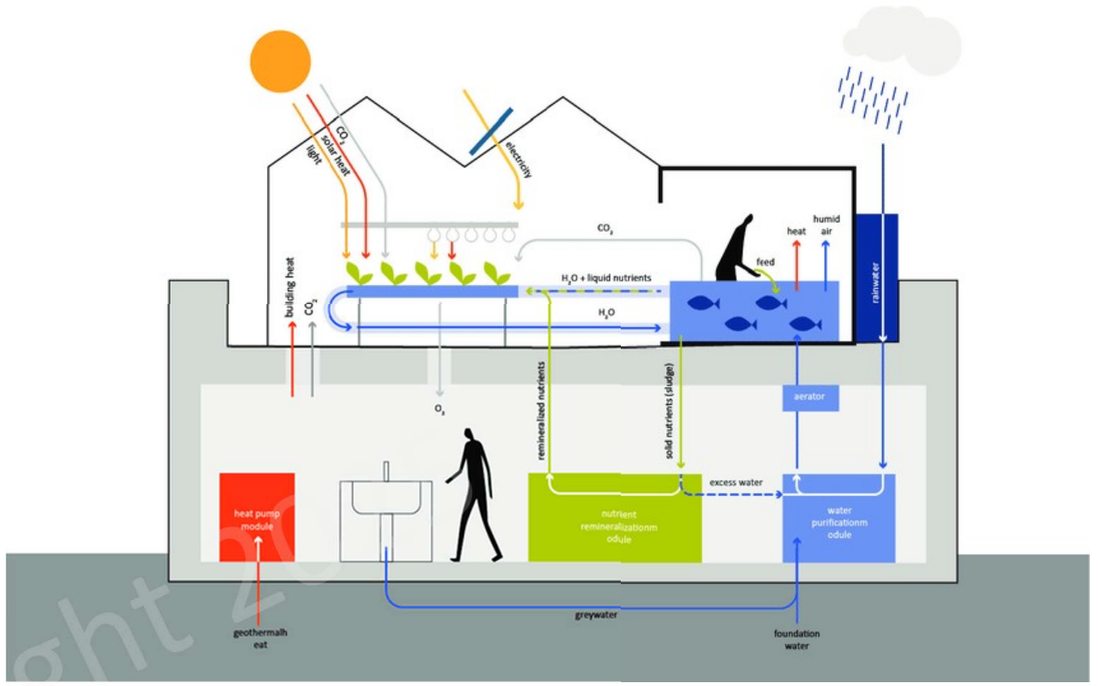
AQUAPONIC = HYDROPONIC + AQUACULTURE

Aquaponics is a farming system that uses a symbiotic relationship between fish and plants to grow vegetables and fish. In this closed-loop system, the fish's waste is converted into nutrients for the plants, and the plants purify the water for the fish



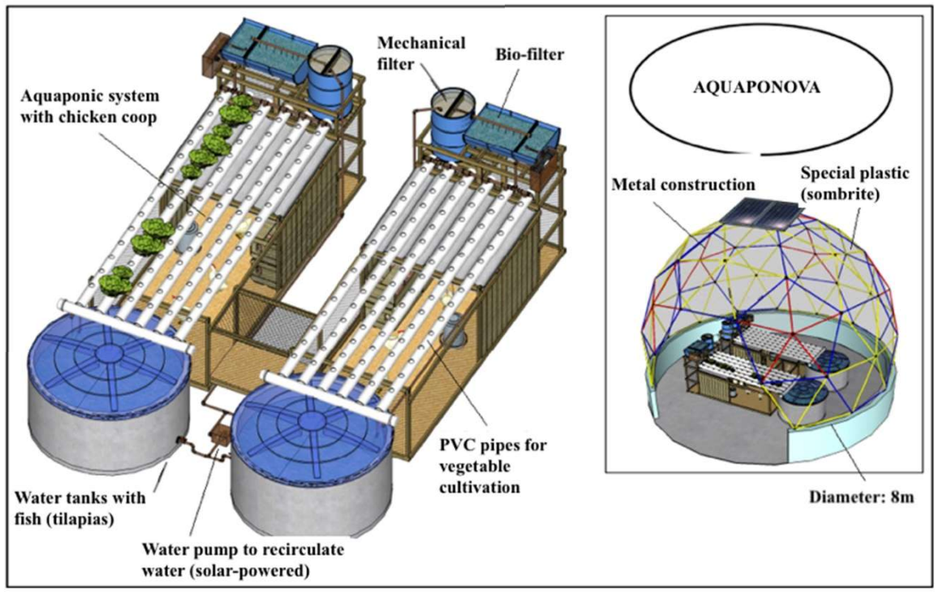
Aquaponics Basic Diagram

(Medium, Discover the Ultimate Indoor Garden : Sustainable Aquaponics and Beautiful Decor*)*



Building Integrated Rooftop Greenhouse with diagrammatic system integration

(ResearchGate, Building an Ecosystem)



Aquaponics Design

(MDPI, Climate-Smart Agriculture in the Northeast of Brazil)

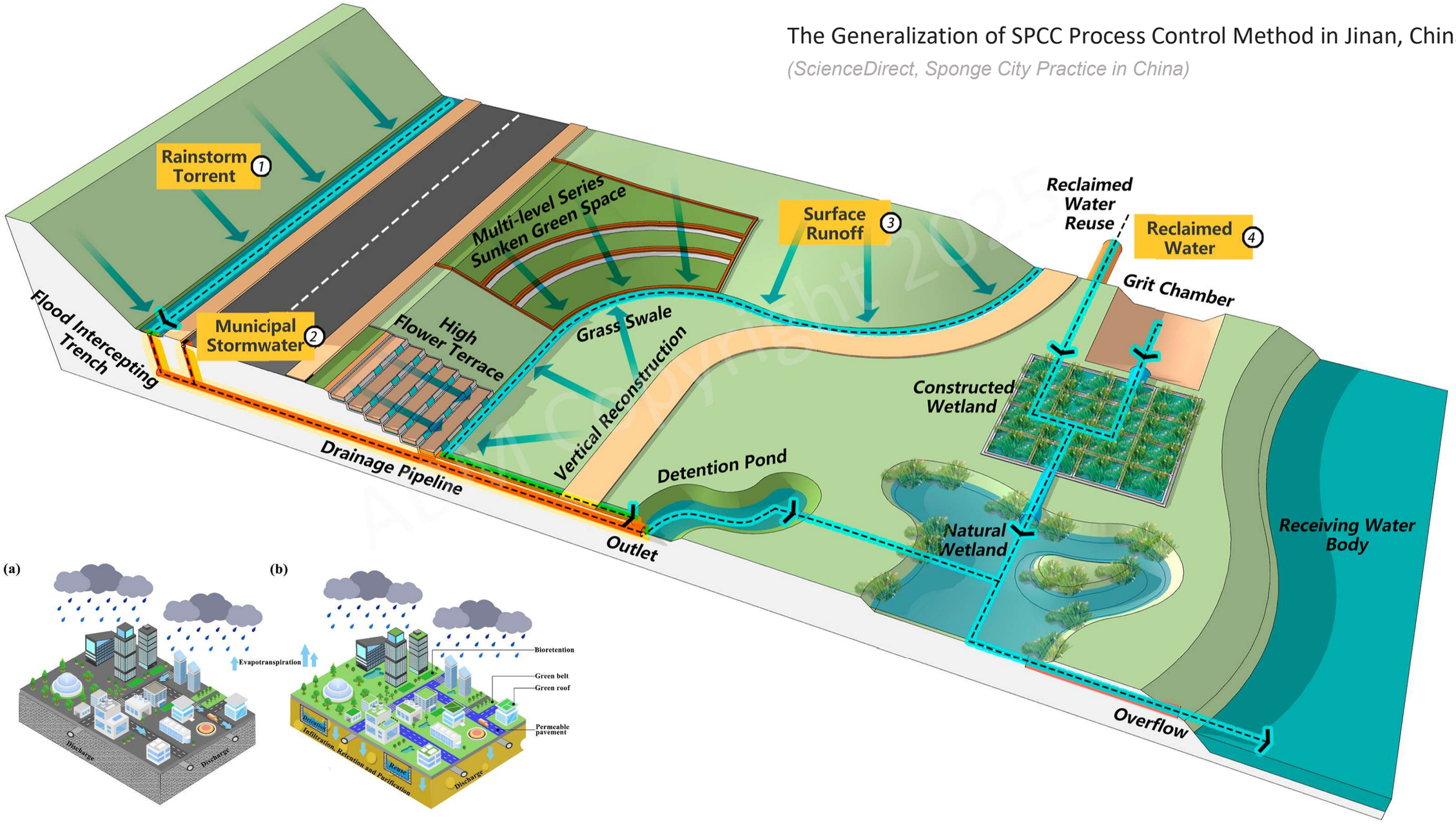
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SPONGE CITY (OPTIONAL)

The Generalization of SPCC Process Control Method in Jinan, China.

(ScienceDirect, Sponge City Practice in China)



Different hydrological processes in (a) traditional quick-drainage and (b) Sponge City

(ScienceDirect, Sponge City Practice in China)

DELAPAN LINEAR PARK

SPONGE CITY (OPTIONAL)



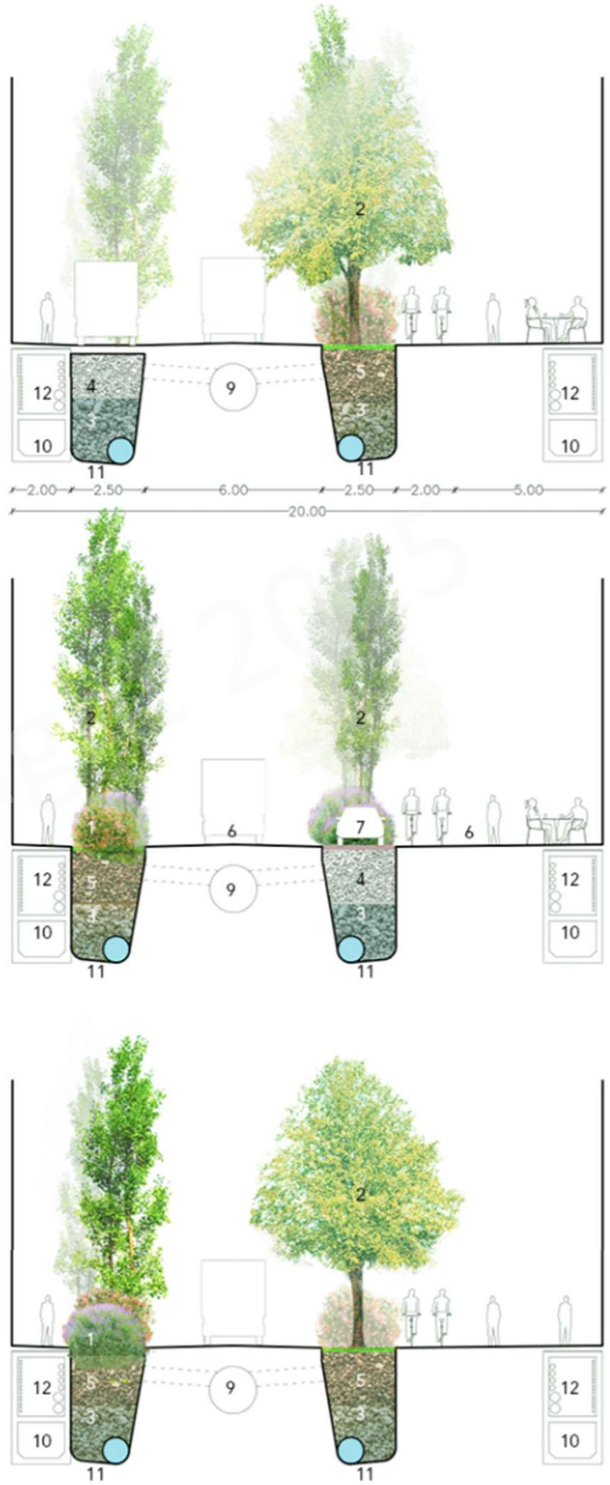
1 Rain water flowing to permeable surfaces (in this case the parking lots)
2 Permeable parking lot surface (it can be a metal mesh that lets the water go through)
3 Gravel-filled underground canal that directly stores rain water. The contiguous vegetation can then slowly absorb it.
4 Part of the canal planted with Mediterranean trees resistant to cycles of humidity and drought:
- Salix alba
- Salix fragilis
- Populus nigra
- Populus alba

5 Part of the canal planted with Mediterranean vegetation resistant to cycles of humidity and drought:
- Vitex Agnus Castus
- Nerium Oleander

6 Overflow tube
7 Infrastructure gallery
8 Sewer

Diagram of a street implementing the Sponge City concept

(Behance, Torrent Estadella Eco-Industrial Park by Eduard Barcells)



1 Mediterranean vegetation typical from the "rieres" resistant to cycles of humidity and drought:
Vitex Agnus Castus
Nerium Oleander
2 Mediterranean trees typical from the "rieres" and resistant to cycles of humidity and drought:
Salix alba
Salix fragilis
Populus nigra
Populus alba
3 Recycled gravel large stones
4 Recycled gravel smaller stones
5 Vegetal soil
6 Asphalt
7 Permeable parking lot surface made of a corten steel metal mesh that lets the water go through
8 Asphalt paint
9 Overflow tube
10 Sewer
11 Water tight membrane to avoid contamination of water table
12 Infrastructure gallery

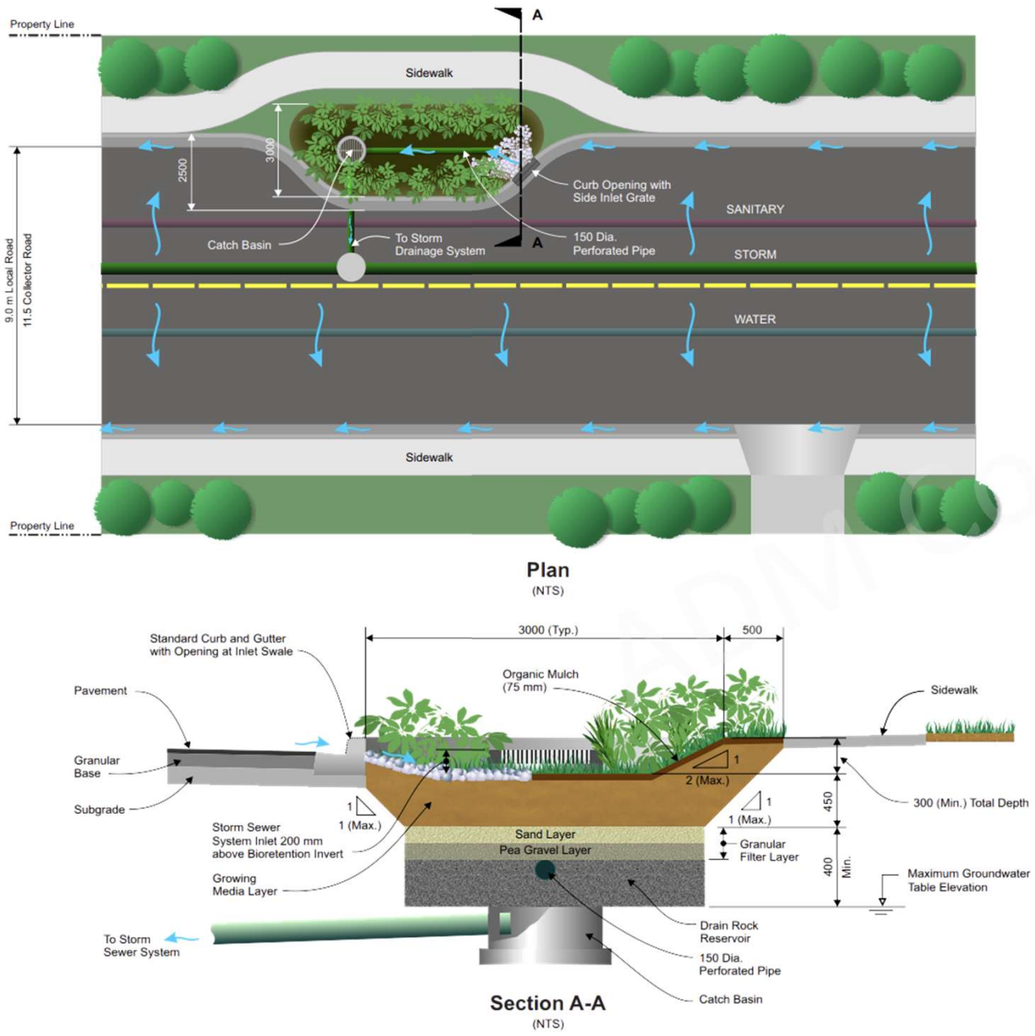
Sections of streets

(Behance, Torrent Estadella Eco-Industrial Park by Eduard Barcells)

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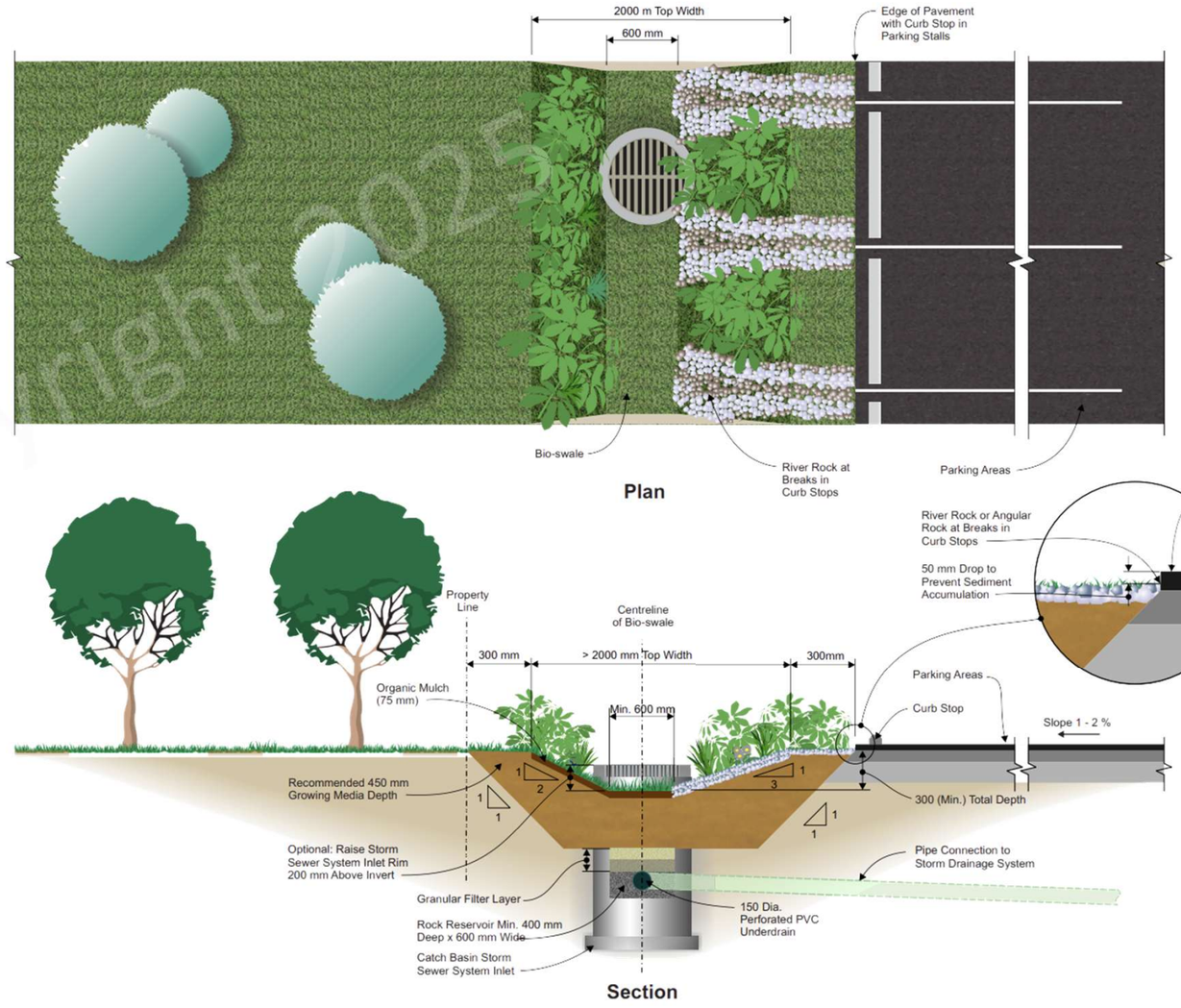
DELAPAN LINEAR PARK

BIOSWALE / BIORETENTION (OPTIONAL)



Typical Bioretention

(The City of Calgary, Low Impact Development Guidelines)



Typical Bio-swale

(The City of Calgary, Low Impact Development Guidelines)

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BIOSWALE / BIORETENTION (OPTIONAL)

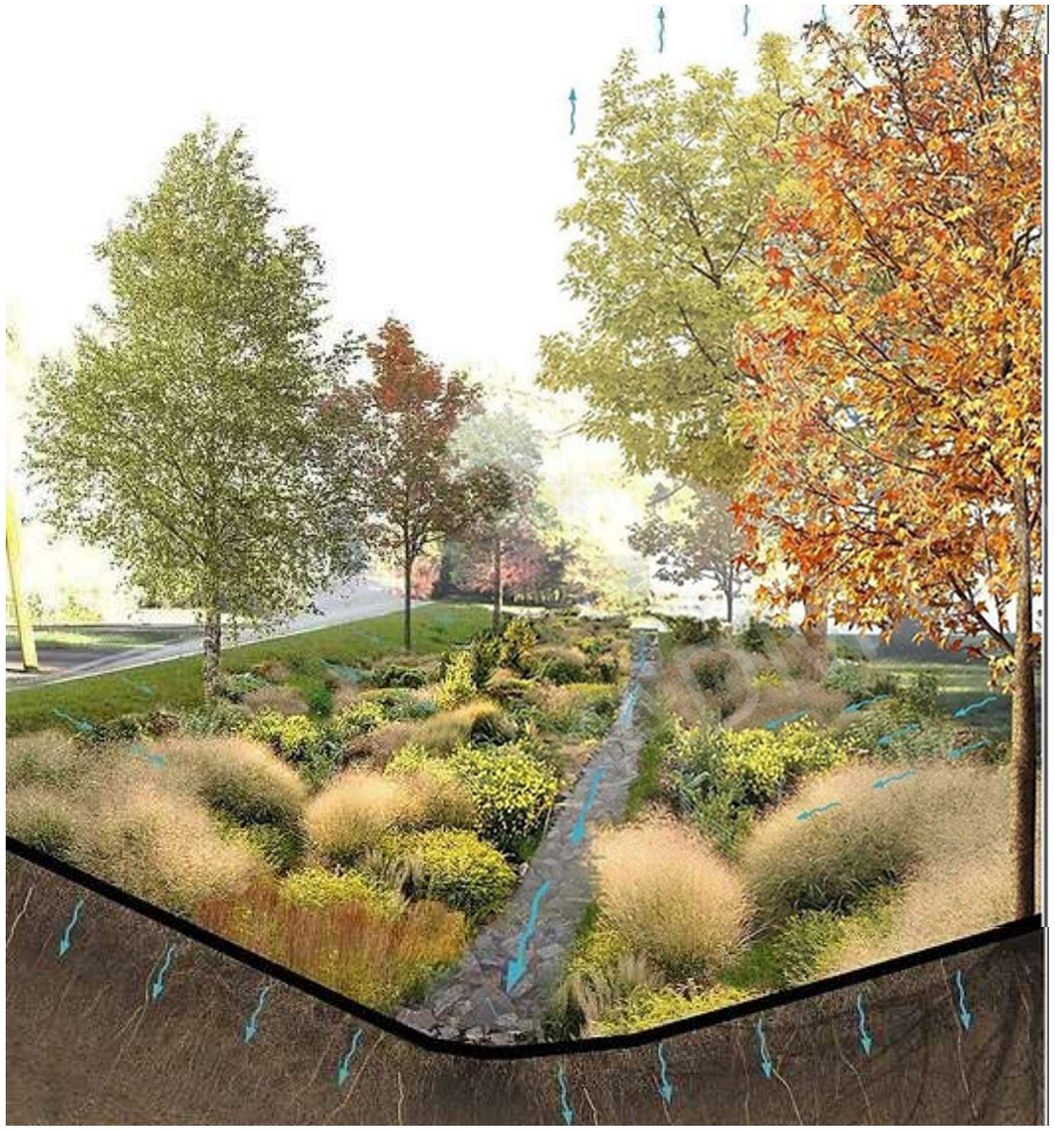


Diagram of a Bioswale

(2nd Nature Works, Bio-swales + Tree Pit Cells)

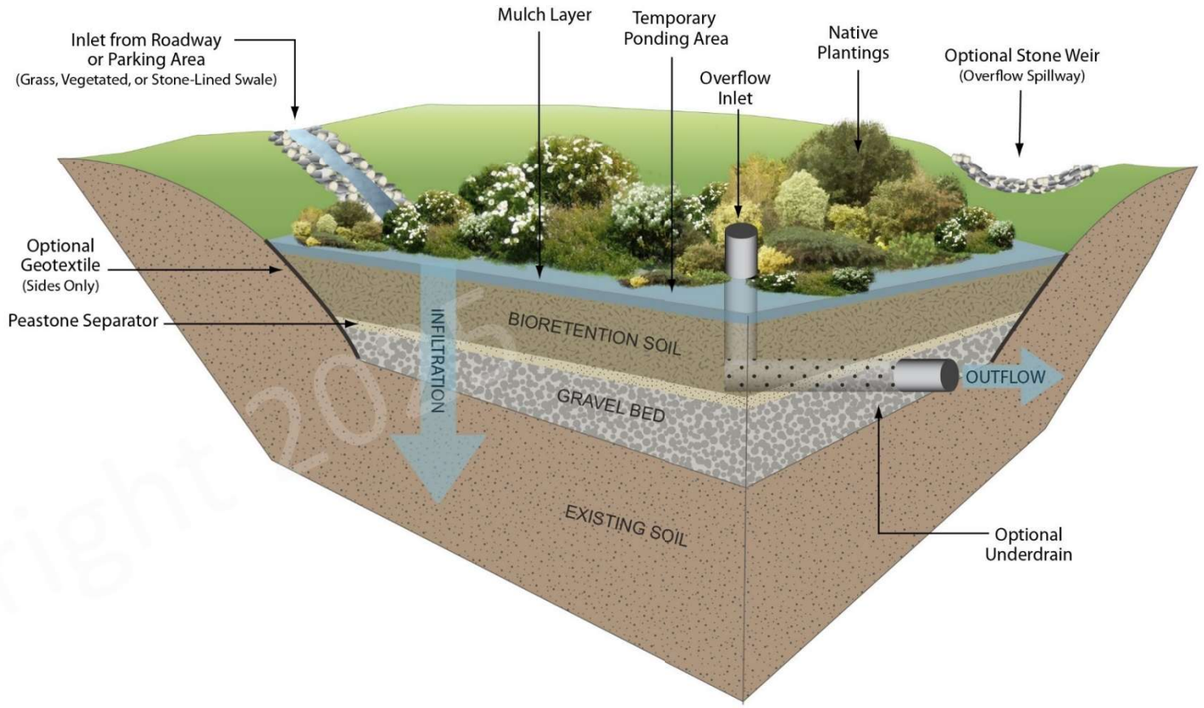
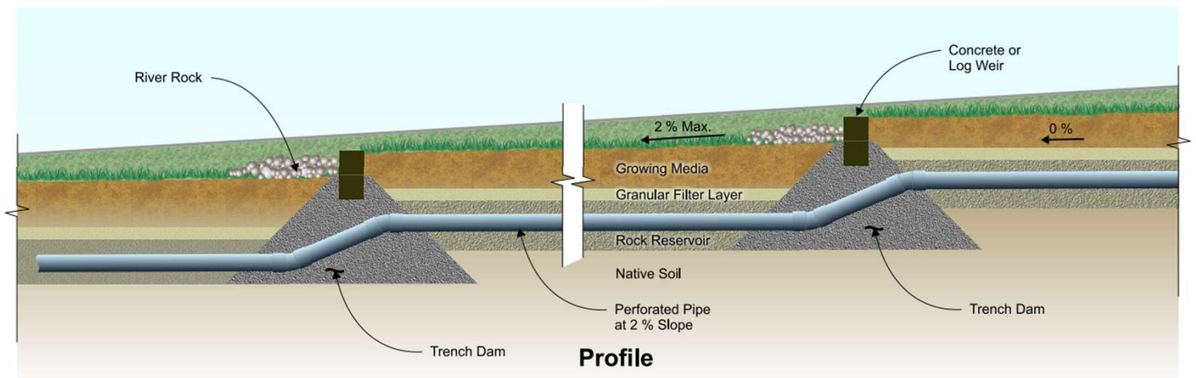


Diagram of a Bioretention Basin

(Ocean Blue Project , Bioretention Basin Maybe the Solution to Pollution Runoff)



Alternate Profile along Bio-Swale for slopes

(The City of Calgary, Low Impact Development Guidelines)

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MANAGED INDUSTRIAL PARK (MIP) GUIDELINE MALAYSIA

MIP GUIDELINE (PLANMalaysia@Selangor)

- Land Size minimum 200ac.
- Landed – Individual Title or Strata Title
- Build-to-Lease (BTL), Build-to-Suit (BTS)
- Perimeter Fence
- Controlled Access
- 24 hours Security System
- Managed by **Industrial Park Manager (IMP)**
- Management Office within Park

- Activities Zone
- Industrial Area
- Commercial Area
- Infrastructure and Utilities
- Park Facilities
- Sport and Recreation Area



MIP KEY COMPONENTS

1 SECURITY

- Gated and Guarded
- Emergency Respond Team (ERT)
- Element Crime Prevention Through Environmental Design (CPTED)

2 WORKERS ACCOMMODATION

- Centralised Living Quarters (CLQ)
- Executive Living Service Apartment

3 CONCRETE ROAD (OPTIONAL)

- Concrete road (optional)
- Drainage
- Street Lighting
- Street Furniture
- Slope Maintenance (if any)
- Detention pond
- Rainwater Harvesting / Reclaimed Water
- Heavy Vehicles Centralised Parking Area
- Pedestrian Walkway & Bicycle Lane

4 UTILITIES

- Power Stations / Co-gen plant
- Alternative Power Supply (Solar)
- Generator
- Water Tower
- Sewer Treatment Plant
- Centralised Wastewater Treatment Plant (optional)
- Gas supply (natural gas)
- Telecommunication & Internet (Fiber Optics) - >30mbps
- District Cooling (optional)
- Utilities Reserved

5 AMENITIES

- Vocational College/ Upskilling & Reskilling Centre
- Recreational Club House
- Landscape & Green Area
- Food Court
- Commercial Centre (optional)

6 MANAGEMENT SERVICE

- Park Management Office (Information & Business Services
- Workers Transportation (optional)
- Data Centre
- Housekeeping Service (optional)
- Solid Waste Management
- Domestic Waste Management
- Industrial Waste Management (optional)
- Low Carbon City Facilities
- Universal Design
- Smart City
- EV Charging Station
- Park & Ride Concept

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MIP ECOSYSTEM



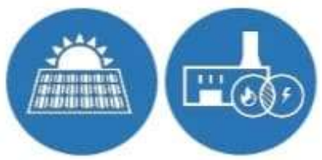
CENTRALISED LIVING QUATERS

CLQ are residential complexes that provide convenient for workers who may need to live close to their workplace.



SMART CENTRE

The centre is designed to support research and development activities in *D8*, focusing on sustainable technologies and practices.



SOLAR FARM AND CO-GENERATOR

The solar farm and co-gen facilities help generate renewable enery to contribute to the long-term sustainability of the park.



PARK MANAGEMENT

D8 is a Managed Industrial Park with complete ecosystem and fully managed by inhouse park management team.



LOGISTICS HUB

A centre specifically designed to support activities related to transport, logistics and goods distribution.



TEVT CENTRE

The college provides education and training opportunities for induviduals interested in pursuing careers in green technology sector.



SME FACTORY

The SME factories within the park likely produce sustainable products as well as provide sustainable services.



CENTRALISED WASTE SYSTEM

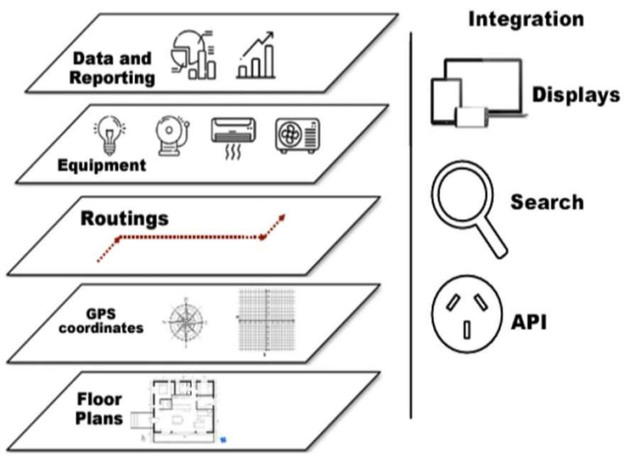
The system helps to reduce the amount of waste that ends up in landfills by treating and processing waste from the industrial park

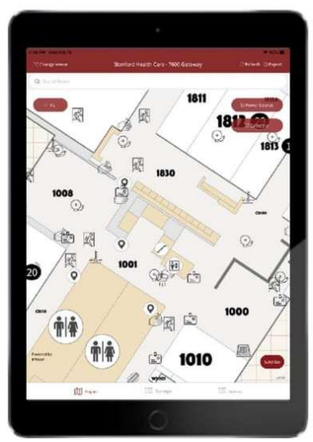
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DIGITAL TWINS IN D8 SMIP



Database of Assets and Photos





Interactive	: Every map objects have attributes and are interactive
Searchable	: Locations and equipment
GPS accurate	: Routing and navigation
Data collection	: Collect data from IoT sensors for alerts and reporting
API integration	: One-line code to integrate into others software

KEY BENEFITS

SAVE TIME

- Reduce service time
- Save commute time
- Save redundant trips

SAVE COSTS

- Save costs of ordering wrong parts
- Save costs of unneeded site visits

STAY COMPLIANT

- Provide maintenance records for audits
- Provide reports for building fire safety

COLLABORATE

- Share equipment info with remote subcontractors

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SALES GALLERY WITH BUSINESS SOLUTION CENTRE

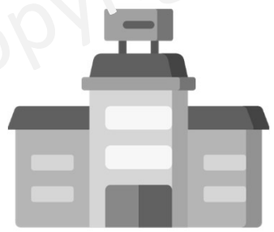
Investors in **DELAPAN** can enjoy facilitation services through supporting services and further enhancing the attractiveness of this project.



COMPANY SECRETARIAL



LOCAL NOMINEE DIRECTOR



SETTING UP OF LOCAL COMPANY



CREATION OF LOCAL BANK ACCOUNT

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SERVICES

- Advise on the preparation of necessary documents
- Submit the application to the relevant Government Agencies
- Follow-up until approval is granted

DOCUMENTS

- ✓ MIDA Manufacturing License
- ✓ Tax Incentives
- ✓ Business Premise License
- ✓ Manufacturing Warehouse License
- ✓ State Consent
- ✓ Registration of Lease
- ✓ Expatriate Services

TIME, COST AND GROWTH

THANK YOU

DELAPAN

SPECIAL BORDER ECONOMIC ZONE