

KWASA DAMANSARA SMART CITY BY KWASA LAND SDN BHD

March 2018





INTRODUCTION
THE COMPANY
THE DEVELOPMENT

- **KWASA LAND SDN BHD (Kwasa Land)**; established in 2010 is a wholly owned subsidiary of the Kumpulan Wang Simpanan Pekerja(KWSP)/Employees Provident Fund(EPF);
- Currently Kwasa Land is developing 2,330 acres of former Rubber Research Institute plantation land in Sungai Buloh, Selangor;
- This is currently the biggest township development in the Klang Valley and a significant content contributor for the Greater KL initiatives.

Kwasa Damansara – The Township

- It is master planned and developed by Kwasa Land Sdn Bhd;
- The 2,330 acres of land is under the jurisdiction of two local councils, which are the Majlis Bandaraya Petaling Jaya (MBPJ) and Majlis Bandaraya Shah Alam (MBSA);



Kwasa Damansara – The Township



Original Purchased : 2,620 acres

Acquired by KVMRT : 290 acres
(On January 2012)

Balance :
2,330 acres Development Land

Local Planning Authority

MBSA : 678 acres
MBPJ : 1,652 acres

Land Tenure

Freehold & Leasehold

Category of Land use

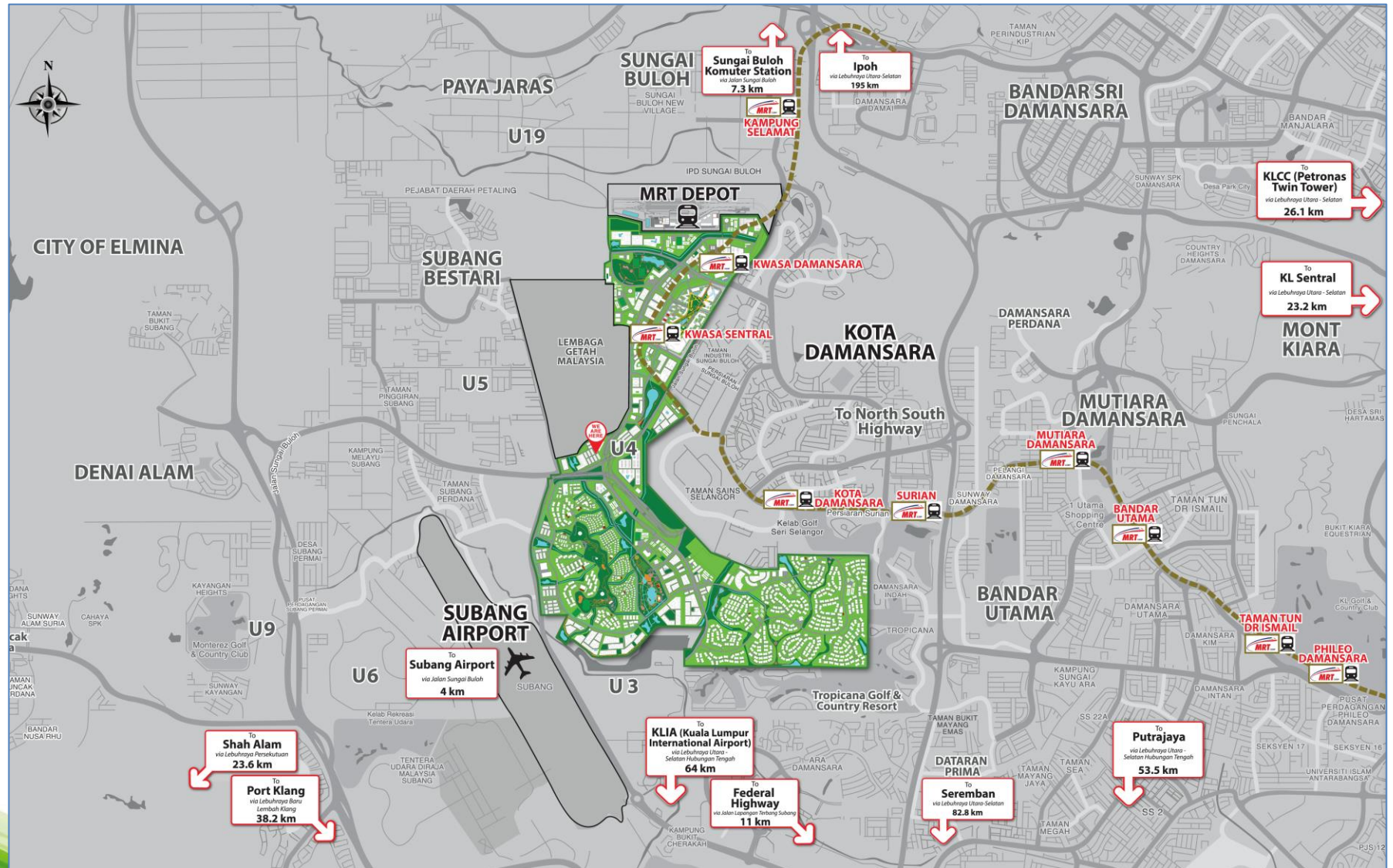
Agriculture

Gazette Land use

MBSA : Mixed Use (*New Zoning
Gazetted on June 2012*)

MBPJ : Rezoning from “Institution” to
“mix use” is still in progress under RKK

Kwasa Damansara – The Connectivity



Kwasa Damansara – The Concept



GREEN TOWNSHIP

- Enhances ecology and creates urban bio-diversity
- Intensifies green density
- Neutralizes carbon emission
- Green Development Component
- Green Travel Plan
- Green Infrastructure
- Green Buildings
- Adopts Urban Environment Accords action plan

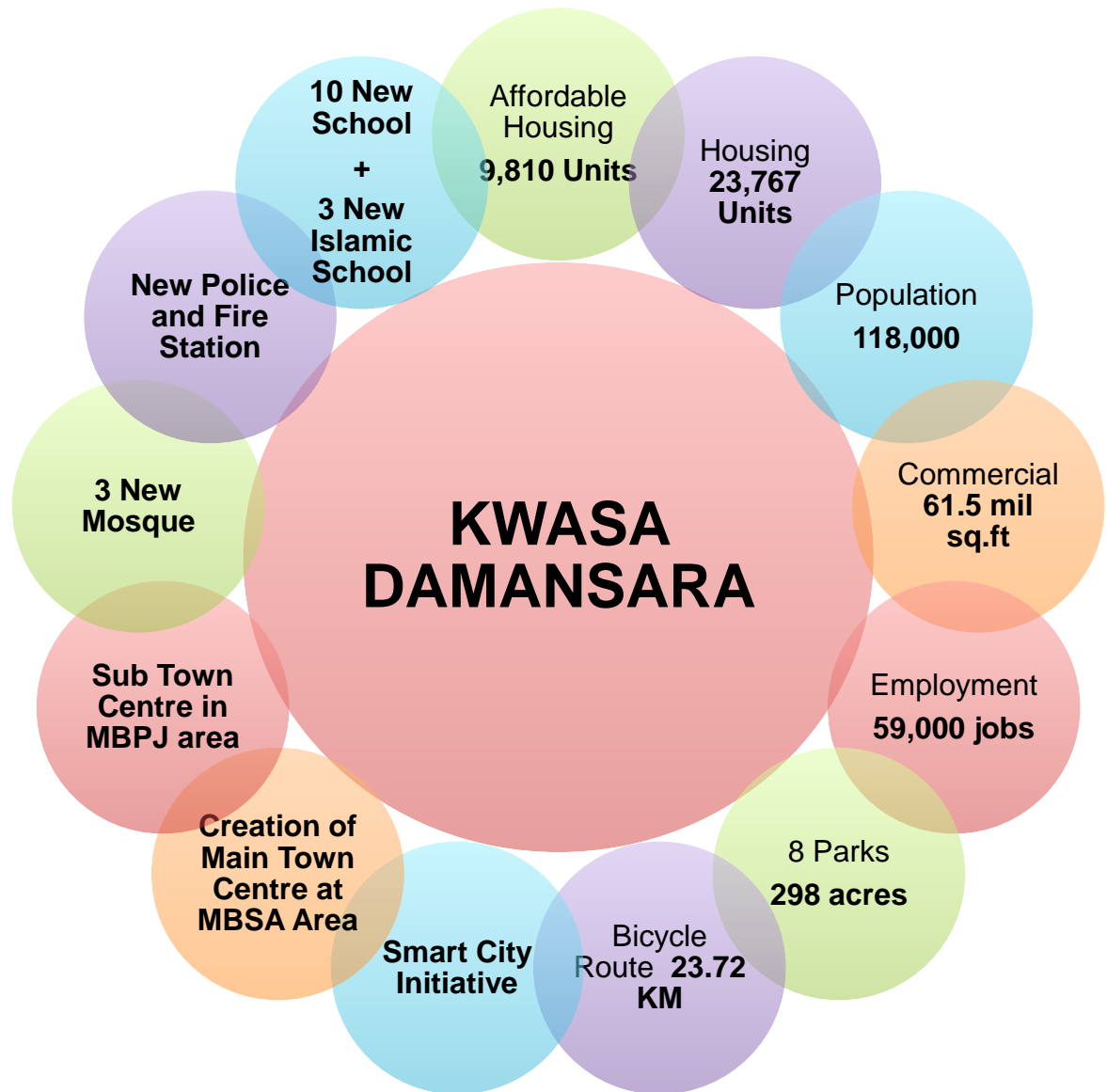
CONNECTED

- Integrated Transportation Network (including connection to Subang Airport)
- Pedestrian Priority City & Walkable Neighborhoods
- ICT Infrastructure
- Link to regional roads and highways
- Cycle ways

INCLUSIVE

- Varying Densities and Types of Housing
- Value Homes & Mixed Income Housing
- Parks and Open Spaces
- Vibrant Centres
- Safe Communities
- Barrier Free Environment
- Preservation of Existing Site Features
- Community Facilities & Amenities

Kwasa Damansara – The Development



KWASA DAMANSARA
THE SMART CITY INITIATIVES:
THE JOURNEY



What is Smart City?

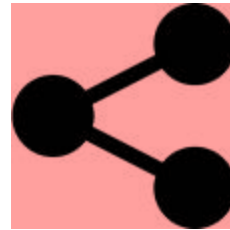
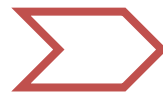
“A Smart City is defined as the ‘effective integration of physical, digital and human systems in the built environment to deliver a sustainable, prosperous and inclusive future for its citizens.’”



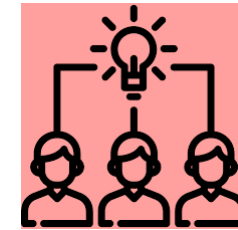
Kwasa Damansara Smart City Vision



**SMART MODERN
CITY
INFRASTRUCTURE**



**FULLY
INTEGRATED
CITY**



**INTELLIGENT
COMMUNITIES**

The Smart City Journey



EDUCATION FOR STAKE HOLDERS

- Board Members & Decision Makers
- KLSB Management & Team Members
- Design Consultants
- Service Providers
- Authorities



INTRODUCTION TO BIM

- Setting up the process via BIM Execution Plan (BEP)
- Detail Explanation of Process, Role & Responsibility
- Flow Charts established for easy understanding



APPLICATION OF BIM

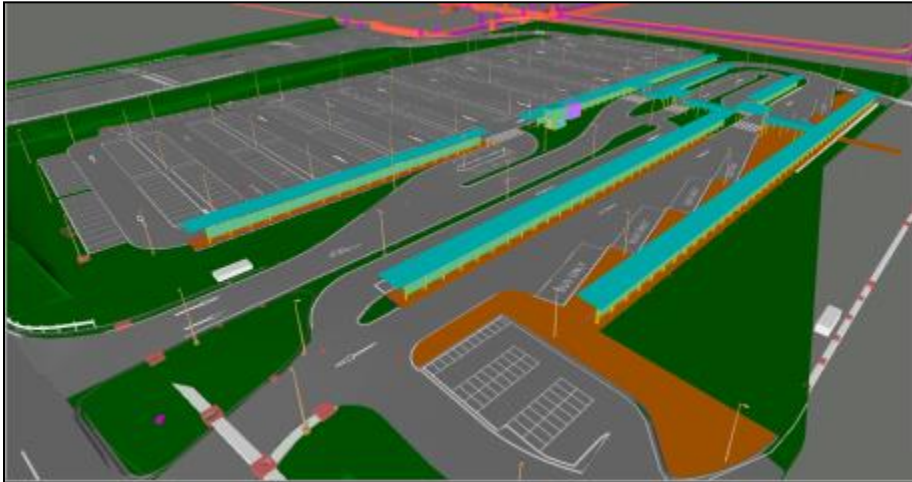
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KWASA DAMANSARA

THE SMART CITY INITIATIVES: BUILDING INFORMATION MODELING (BIM)



Digitization Of Kwasa Damansara : Building Information Modeling (BIM) FOR WPC 1A



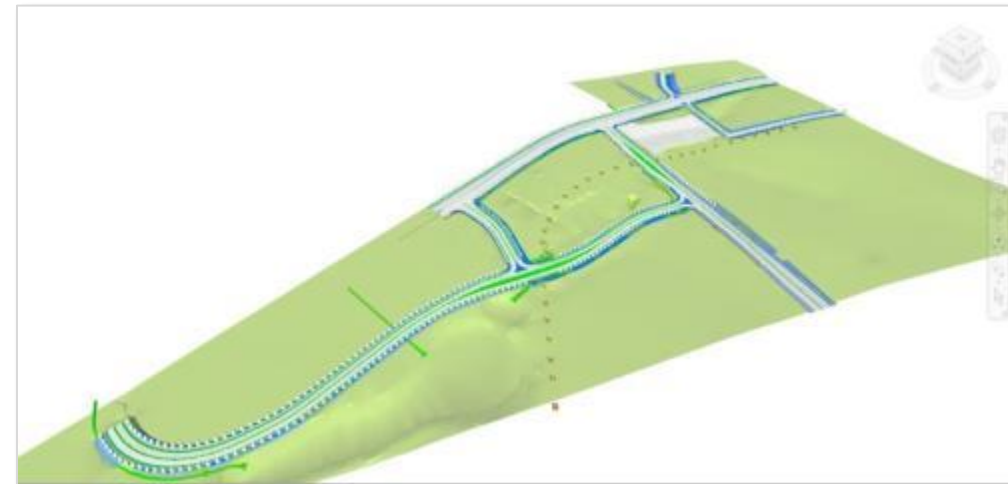
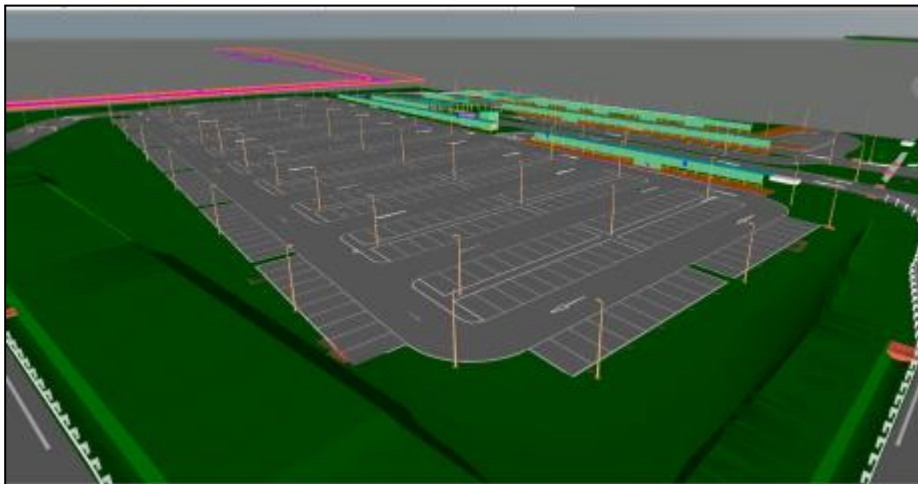
Current Status: **WPC1A - LOD 400 & 500 by contractor**

Milestone 1; **(Park and Ride area)**

- Completed updating LOD 500 As-built model based on approved 2D as-built drawing.

Milestone 2 ; **(All)**

Completed updating LOD 500 As-built model based on approved 2D as-built drawing.

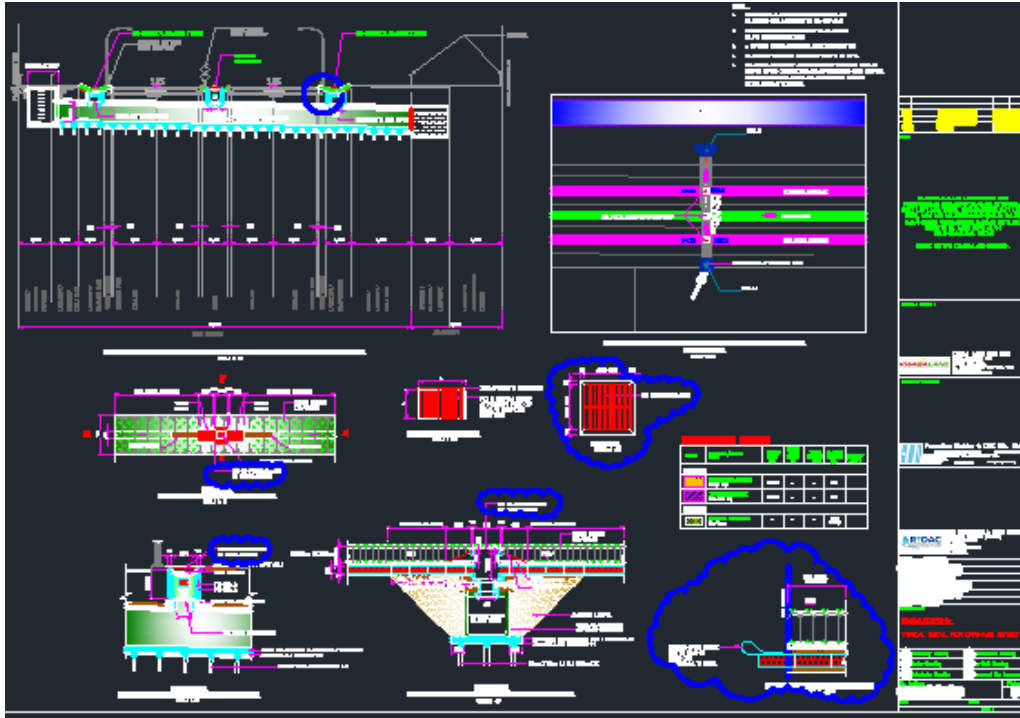


Digitization Of Kwasa Damansara : Building Information Modeling (BIM) FOR WPC 1A



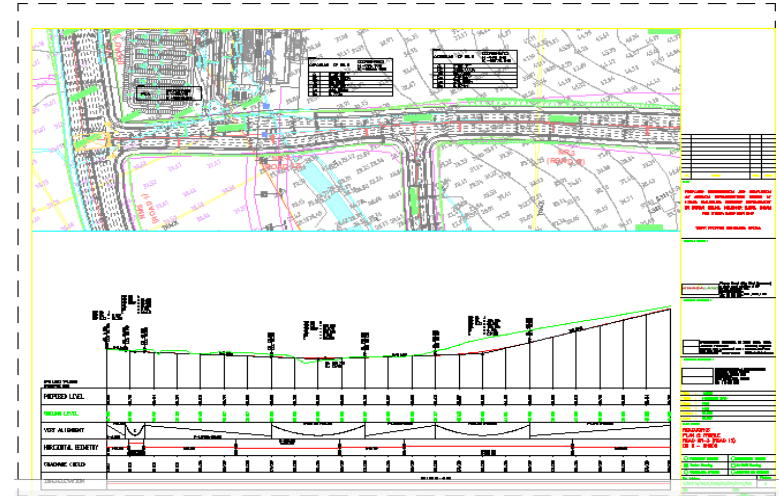
DATE OF SITE POSSESSION	:	OCTOBER 2015
TARGETED COMPLETION DATE	:	OCTOBER 2017
TARGETED COMPLETION PERIOD	:	24 MONTHS
ACTUAL COMPLETION DATE	:	SEPTEMBER 2017
BIM LEVELS IMPLEMENTATION	:	LOD200 TO LOD500

Building Information Modeling (BIM) FOR WPC 1A – LOD200

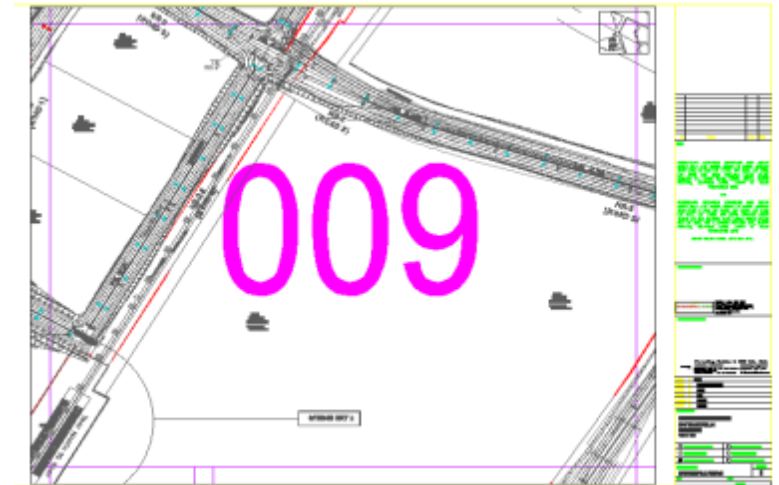


Drainage

LOD200 - Design team working in 2D environment

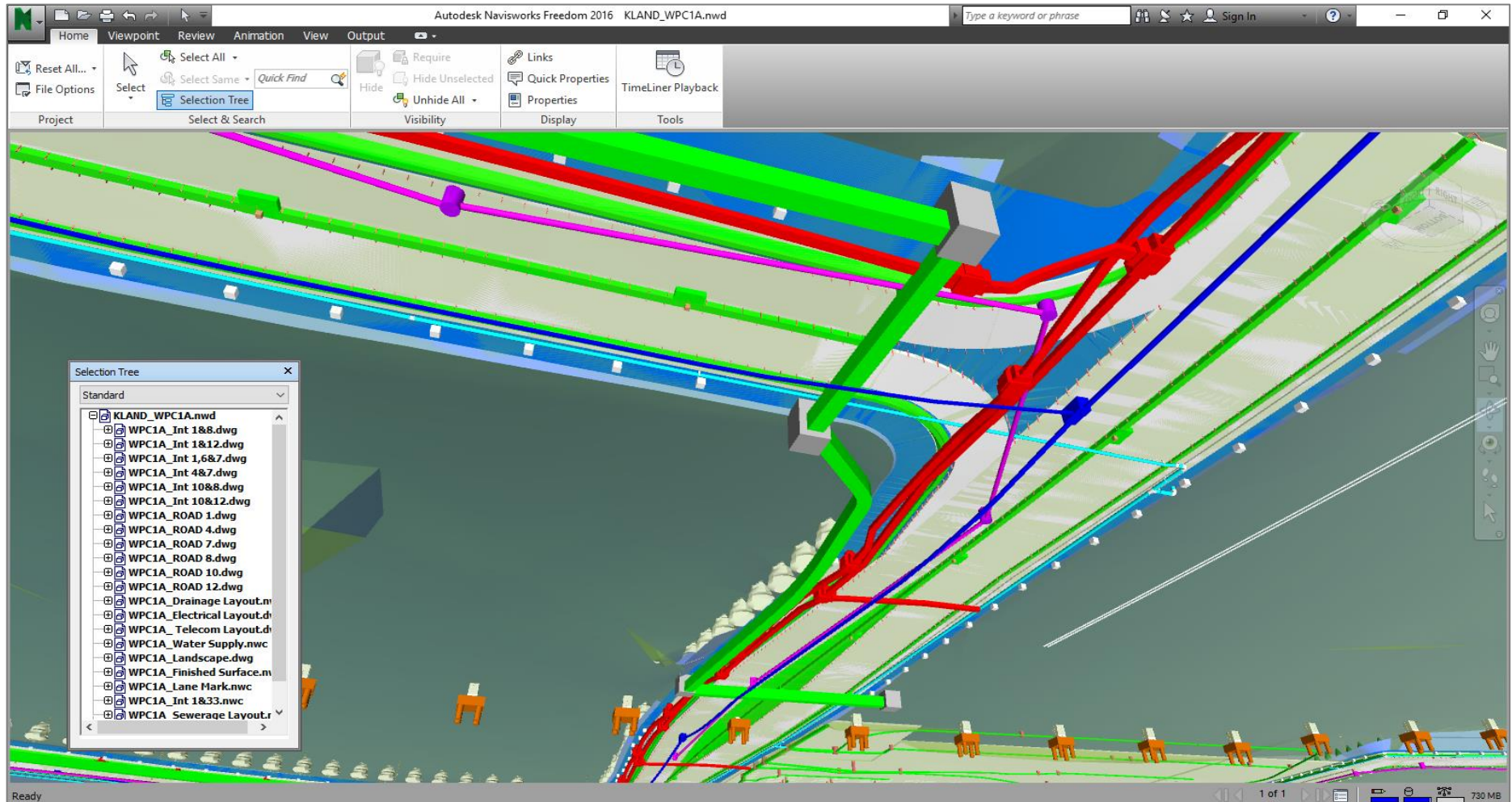


Road Plan & Profile



Street lighting

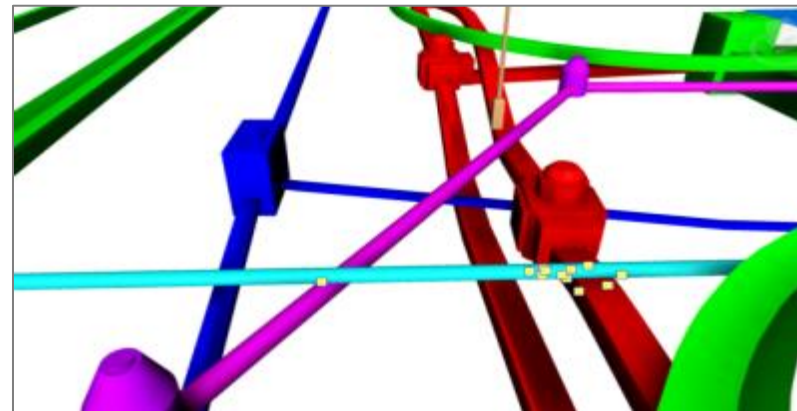
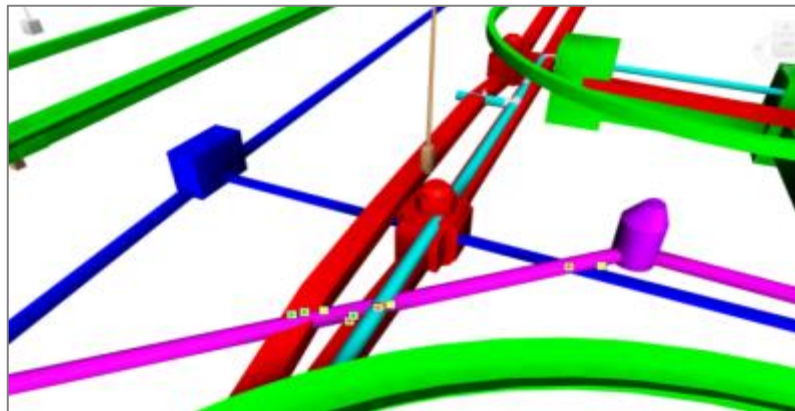
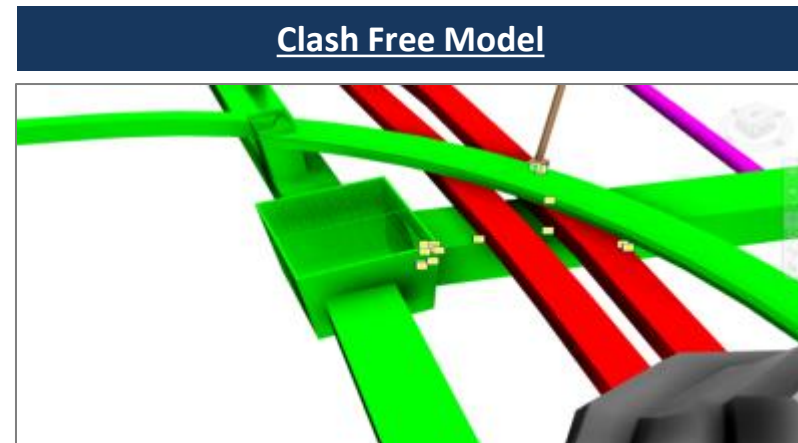
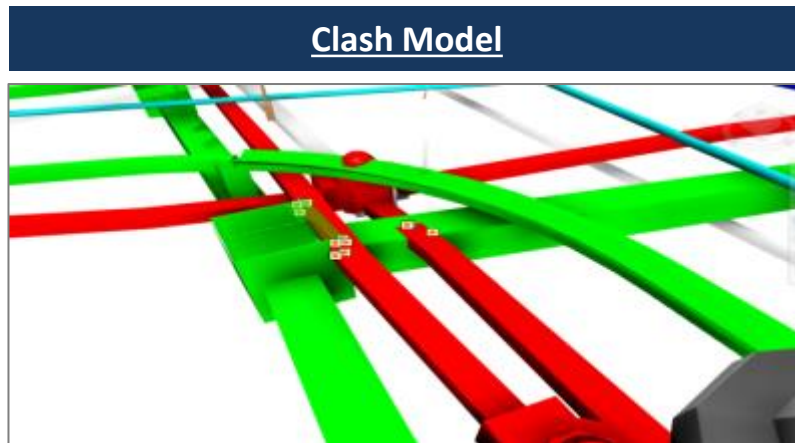
Building Information Modeling (BIM) FOR WPC 1A – 3D Modeling Process (LOD300)



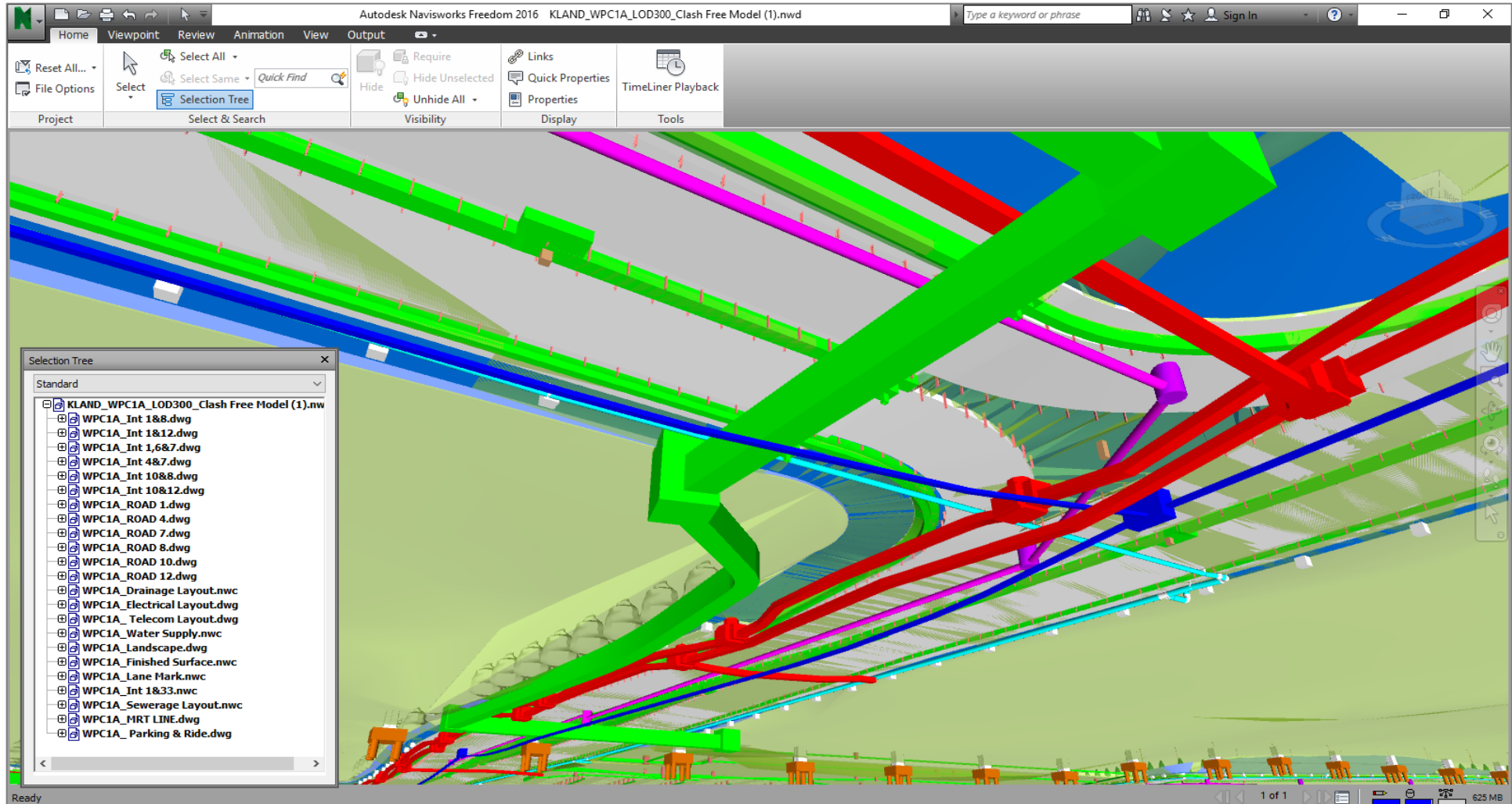
LOD300 - 3D Modeling Process

Building Information Modeling (BIM) FOR WPC 1A – 3D Modeling Process (LOD300)

Coordination input – outputs – efficiency

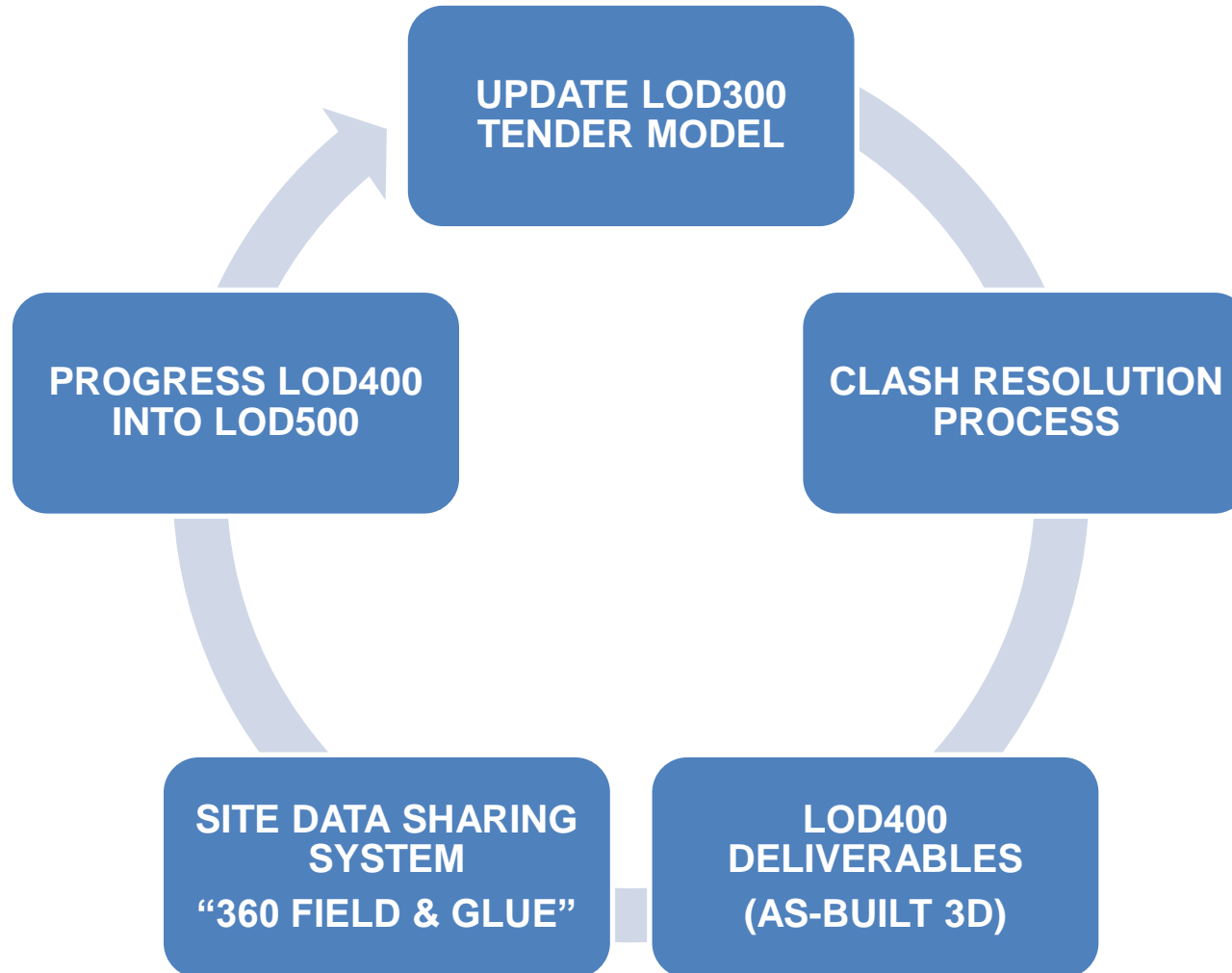


Building Information Modeling (BIM) FOR WPC 1A – 3D Modeling Process (LOD300)



LOD300 – Pre Tender (Clash Free Environment)

Building Information Modeling (BIM) FOR WPC 1A – LOD400 Construction Stage



KWASA DAMANSARA

THE SMART CITY INITIATIVES: BIM – THE CHALLENGES



The Support For Digitization In Kwasa Land: Building Information Modeling (BIM) – Challenges During Design Stage

- Limited understanding and expectation by the stake holders on BIM process;
- Design teams inability to understand BIM input requirement, deliverables and its usage;
- Project teams need to recognize the benefits of the efficiency of using BIM on the project;
- Limited knowledge on the coordination system to be implemented due to different project environment;
- Need strong leadership from the client to ensure the BIM process is well implemented and benefits are achieved.

The Support For Digitization In Kwasa Land: Building Information Modeling (BIM) – Challenges During Construction Stage

- Limited understanding and reluctance of the contractor to embrace the new process;
- Contractors' BIM teams inability to develop LOD300 3D tender model to as-built 400 & LOD500 3D models;
- Inefficiency of the pre-commencement time by the contractors' BIM team prior to actual site commencement;
- Inability of the contractors' BIM team to keep pace with actual site conditions as the construction progressively;
- Inability of the current contractual conditions to enforce the efficient BIM implementation by the contractors.

KWASA DAMANSARA

THE SMART CITY INITIATIVES:

BIM –

THE ACHIEVEMENTS



The Support For Digitization In Kwasa Land: Building Information Modeling (BIM) - Achievements



1.72%
IN VARIATION
ORDERS



ONLY 4
V.O RAISED



REDUCE
COMPLETION
PERIOD



CLASH-FREE
DESIGN



**MUCH
GREATER**
DESIGN
CLARIFICATION





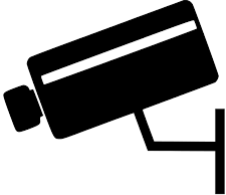






BETTER
COMMUNICATION

THE SMART CITY INITIATIVES: THE CONCEPT OF KWASA DAMANSARA SMART CITY



Conceptualization of Kwasa Damansara Smart City

1	COMMUNICATION	 BROADBAND	 CITY WI-FI	 SEAMLESS MOBILE		
2	INFRASTRUCTURE	 SMART STREET LIGHTING	 SMART SURVEILLANCE	 SMART DISPLAY	 SMART BUILDING	 SMART METERING
3	DIGITAL SERVICES	 CITY PORTAL				

THE SMART CITY INITIATIVES: THE BENEFITS OF KWASA DAMANSARA SMART CITY



Smart City & Benefits For Kwasa Damansara



**BETTER
QUALITY OF
LIFE**



**EFFECTIVE
CUSTOMER
ENGAGEMENT**



**MORE
COST-
EFFECTIVE
CITY**



**IMPROVE CITY
MANAGEMENT**



**SAFER
PLACE FOR
PEOPLE TO
LIVE AND
WORK**



**HIGHER
GDP**

THE SMART CITY INITIATIVES: THE PARAMETERS OF KWASA DAMANSARA SMART CITY



Kwasa Damansara – The Smart City Initiatives



“The Parameters”

AREA	Must be Provided	Good to have	Desirable	Optional*
COMMUNICATIONS				
Internet access at home / business	Yes			
Wifi at Common Areas	Yes			
Wifi Full Connectivity			Yes	
Optic fiber at home / business	Yes			
Fixed Line Telephony	Yes			
TRANSPORT				
Bike sharing platform		Yes		
Electric public transport				Yes
Intelligent Transport System in City				Yes
SECURITY				
CCTV at home / business			Yes	
CCTV for common areas	Yes			
Intelligent CCTV System (behaviour analysis)		Yes		
Security Operation Centre	Yes			
ENERGY				
Schedule energy consumption efficiency platform				Yes
Smart Energy meter at home / business				Yes
Home Automation Network at home/business			Yes	
Energy Demand Response for common areas		Yes		
Smart Street Lighting		Yes		
Electric Vehicle recharge infrastructure at home/business				Yes
Electric Vehicle recharge infrastructure in common areas			Yes	
Micro grid (renewable generation and storage) concept for the whole city			Yes	
Self healing electric grid network			Yes	
OTHERS				
Advertisement & Signage	Yes			
Waste Management System			Yes	
Water system leak detection			Yes	
Command Global Centre (Comm + Energy + Sec + Transport + ...)	Yes			

THE SMART CITY INITIATIVES: CONCLUSION



The Summary: Kwasa Damansara Smart City



IMPROVED LIVEABILITY



ECONOMIC PROSPERITY



ENHANCED SUSTAINABILITY

Thank You

