



SPECIAL PRESENTATION ON EKO TOWERS (EKO TOWER I & II)



WHO WE ARE

Lambert Electromec Limited is an international leader in Engineering, Procurement & Construction (EPC) and in high quality Mechanical, Electrical and Plumbing (MEP) such as:



Design & Build for Building services (Offices, Hospitals, Hotels, Institutions, Factories, Mixed-Use, Residential, etc.) and Industrial Plants



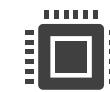
MEP for infrastructural and enabling works in Rail-stations, Stadiums, Ports, etc.



Power plants and substations



Oil & Gas Modular refineries



Data centers



Lambert Electromec with a global workforce of more than 1,000 personnel, it is currently operating in several African cities and registered offices in countries such as:

NIGERIA ■ ■

GHANA ■ ■

CÔTE D'IVOIRE ■ ■

With its international exposure, it uniquely frames and shares beneficial and exclusive partnerships with global leaders in engineering and technological products and solutions

Lambert has proven to its clients to be in a unique class of professional contractors. It leverages from its international offices to constantly provide new innovative systems and construction. It uniquely distinguishes itself with robust management and project structure having been certified with ISO 9001:2015, ISO 14001:2015 & ISO 45001:2018, this allows us to effectively manage the largest and most complex projects in its industry.





HISTORY

Lambert Electromec Limited was created in affiliation with Lambert Somec Inc., itself founded in 1954 in Quebec, Canada. Lambert Somec Inc passed on its heritage of first-class professionalism, top engineers, and its exceptional overall operational system to Lambert Electromec Ltd. which operates independently in the West African region.

PROJECTS IN FOCUS



EKO TOWER I

Engineering, Installation and Design contribution to the complete state of the art Electrical & Mechanical works in the 20 storey edifice for Eko Tower I, consisting of latest technologies, eco-friendly solutions, with 20MV power generating plants, extra low voltage and security systems in Victoria Island, Lagos - Nigeria, Mechanical and Electrical works project executed by Lambert Electromec Limited.



EKO TOWER II

Lambert Electromec executed the Electrical & Mechanical works of the 27 Storey mixed-use tower boasts of the best technologies in Electro-Mechanical applications. It features an industrial clinic, Gym Complex, Guest Houses, Restaurants, Swimming pool and more.

PROJECT INFORMATION

EKO TOWER I

| | |
|---------------------------|--|
| Contract Value: | \$45,000,000 |
| Location: | Victoria Island, Lagos |
| Number of Floors: | 20 Floors |
| Parking Floors: | 4 |
| Total Area: | 42,000m ² |
| Occupied Area: | 21,500m ² |
| User Capacity: | 1,250 |
| Car Park Capacity: | 225 |
| Data Center: | 2 Nos Data Centers (tailored to meet Tier 4 categorization) |



SYSTEMS

MECHANICAL

- **Main Chilled Water** system including chillers, pumps & FCUs
- **Chilled Water** system for Telecom rooms including Precision FCUs
- **Drainage** system including sanitary fixtures and sewage submersible pumps
- **Rain Water** system including gutters and rain water submersible pumps – Pluvia roof drainage system
- **Variable Air Diffusion** system
- **Fire Fighting Sprinkler** system including jokey pump, electrical pump, fire hose cabinets, and wet risers landing valves
- **FM200** system
- **Water Supply** system with variable speed pumps and pressure reducing stations
- **Extraction Fans** with CO sensors
- **Pressurization Fans** linked to fire alarm system





SYSTEMS

ELECTRICAL

- **Earthing & Lightning** system
- **MV & LV** switchgears
- **Lighting** system - 13,300 units Including LED & Indirect lighting
- **Dry Type Transformers**
- **Bus Ducts** distribution system
- **Easy Bus Bars** flexible system
- **Fire alarm & voice evacuation** addressable system
- **Emergency Lighting addressable** system - 1850 units

SYSTEMS

TELECOM / LOW CURRENT / SECURITY

- **Access Control, Intrusion** systems including door plungers, badge readers, safety break glasses, tripods, turnstiles, PMR's and barriers.
- **BMS** to monitor and control all M&E systems – above 2,000 points
- **Integration Fire Alarm, Access Control & CCTV**
- **CCTV** system - fixed and rotating cameras (90° & 180°)
- **VDI** with copper cables, fiber optic cables, telecom cabinets & racks
- **Tier 4 Data Centers**
- **Parking Management System**
- **UPS**
- **Scanners**
- **Metal Detectors**



SYSTEMS

ADDED VALUE SYSTEM

VAD SYSTEM

- Self-Controlled Diffuser with
- Thermostats and other Control
- Accessories for each diffuser
- Cooling Comfort Optimized
- Cost Saving on chilled water pipes,
- insulations, cables, FCUs

FIRE FIGHTING SYSTEM

- All components are UL (Under Writer Laboratories) listed
- CPVC pipes
- environment friendly as per the LEED norms
- Less Cost
- Shorter Installation Time
- FM200 less hazardous than CO₂ to human health
- Fire Damper on each crossing for fire rated shaft

BUS BAR & EASY BAR

- Substitute for power cables and cable trays
- Shorter Installation Time
- More Secure & Efficient
- Less Space needed
- More Ergonomic & Flexible for Workplace Design
- Improved aesthetics
- MDB size reduction

ADDED VALUE SYSTEM

HEAT RECOVERY SYSTEM /VFD

- HR Fresh Air Handling unit is distributed via a duct network
- Makes use of energy in the exhaust air instead of it being rejected into the environment
- Controls humidity to an optimized level
- Savings up to 20% on Initial Equipment costs and Operational costs
- Variable Frequency Drive chilled water pump to minimize energy consumption

PARKING MANAGEMENT SYSTEM

- Pinpoints available parking spaces
- More efficient use of parking resources
- Stops congestion
- Parking Ventilation Fans operate with CO sensors for more energy savings
- Real-time Level wise vehicle counting and parking status
- Constitutes the Access Control (Barrier control, Loops, Automatic gates) and Security system

BUILDING MANAGEMENT SYSTEM

- Monitoring, Controlling and Optimizing
- HVAC, Power systems, Lighting,
- Access Control, CCTV, Fire Alarm,
- Lifts, Plumbing
- Better Comfort, Safety, Efficiency
- Monitoring critical loads power
- continuity

ADDED VALUE SYSTEM

STRUCTURED CABLING METHOD

- Entrance Facility at GF receives the external fiber optic cable
- Vertical Distribution – Backbone – distributes the fiber and copper cables to each technical room (GDR) from 1st to 18th floor
- Horizontal Distribution connects the GDRs to the User Outlets
- 20 years warranty on data cabling

DESIGN

- Main Telecom room in 10th floor – receives fiber, coaxial and copper cables
- 2 Data Centers in 3rd and 10th floor
- Technical Room (GDR) in each floor

HORIZONTAL CABLING

- 6216 points of Copper
- 4824 points of Fiber
- 15 min per fiber termination

FIGURES

EQUIPMENT FIGURES

| Item description | Qty | Unit | Unit capacity | Brand | Total capacity |
|---|-----|------|---------------|------------------|----------------|
| CHILLERS ON ROOF - For Telecom rooms only | 3 | Nos | 64.2 tons | McQuay - Italy | 192.6 tons |
| CHILLERS ON PLATFORM | 4 | Nos | 279.3 tons | McQuay - Italy | 1117.2 tons |
| FRESH AIR HANDLING UNITS AT ROOF (Heat Recovery System) | 2 | Nos | 8.14 CM/S | McQuay - Italy | 8.14 CM/S |
| UPS AT GROUND FLOOR FOR COMMON USAGE | 3 | Nos | 200 KVA | Socomec | 600 KVA |
| UPS AT GROUND FLOOR FOR CRITICAL LOAD | 2 | Nos | 500 KVA | Socomec | 1000 KVA |
| UPS FOR CRISIS ROOM AT 17TH FLOOR | 1 | Nos | 20 KVA | Socomec | 20 KVA |
| MDB PANEL AT GROUND FLOOR | 2 | Nos | 4000 A | Legrand - France | 8000 A |
| TRANSFORMERS AT GROUND FLOOR | 3 | Nos | 2500 KVA | Zucchini - Italy | 7500 KVA |
| FIRE ALARM CONTROL PANEL AT GROUND FLOOR | 1 | Nos | 10 LOOPS | Simplex | 10 LOOPS |
| EMERGENCY LIGHT CONTROL PANEL AT GROUND FLOOR | 1 | Nos | 48 LOOPS | TM Technologies | 48 LOOPS |
| GENERATORS | 2 | Nos | 2500 KVA | SDMO | 5000 KVA |
| BACK-UP/EMERGENCY GENERATOR | 1 | Nos | 1400 KVA | SDMO | 1400 KVA |

OTHER FIGURES

Peak Staff (foremen, technicians, labors): **270**

Expats: **13**

Engineers on site: **8**

Project Man Hour: **962,898 hours**

Cat 7 total length: **350,000m**

User Maxipoles: **680**

CCTV Cameras: **139**

FCUs: **260**

PROJECT INFORMATION

EKO TOWER II

| | |
|---------------------------|------------------------|
| Contract Value: | \$30,500,000 |
| Completion Period: | 28 Months |
| Number of Floors: | 27 Floors |
| Location: | Victoria Island, Lagos |

FEATURES

The building consists of a mixture of real estate components including:- Hotel & Amenities (105 keys), Clinic, Medical & Social Centre, Parking, Restaurants and Bars, a pool, world class gym facility and more.



SYSTEMS

MECHANICAL

- **Chilled Water Cooling System** with Water cooled chillers (550 TR) as well as heat recovery system, dry coolers, air handling units with heat recovery and fan coils in addition to general ventilation systems and kitchen hoods extraction systems.
- **Central Hot Water System** utilizing heat rejected from the chillers provides hot water through the building feeding the guest rooms, kitchens, laundry.
- **Smoke Extraction** and make up air system is provided as per French norms for safe evacuation in case of fire in addition to staircase pressurization.
- **Complete Fire-fighting Systems** (sprinklers, FHCs and landing valves, FM200 clean agent in data rooms) are provided including plumbing and drainage systems in addition to medical gas systems for the medical center.





SYSTEMS

ELECTRICAL

- **Power Plant**
- **Medium Voltage to Low Voltage** transformation
- Sophisticated **Power Distribution network** including two bus bar risers
- Light Fittings with a **lighting control system**
- **Central Battery System** assuring the emergency lighting in case of power failure.
- **Extra Low Voltage** - a telephone and data distribution network
- **Parking Management System**
- **Fire Alarm System**
- **Integrated Security System.**

SPECIAL PROJECT FEATURE

NCDMB HEADQUARTER OFFICE COMPLEX (NIGERIA CONTENT TOWER)

NCDMB Office Complex consists of 16 floors Office Building, Multi floor Car Park and a two floor Conference Building. This Office Complex is ultra modern and eco friendly. Lambert Electromec is employing the latest building principles and state of the art Electrical and Mechanical installations, in Bayelsa, Nigeria.

PROJECT INFORMATION

- 16 storey office building ▪ Occupied Area: 40,000m²
- 2 storey conference hall building ▪ User Capacity: 1600
- 4 storey multi-level car park ▪ Conference hall capacity: 1000
- Total Area: 67,500 m² ▪ Car park capacity: 1000
- 1 Data Center



SUSTAINABILITY EXPERIENCE (EDGE, LEED & GREEN STAR CERTIFICATION)



ONE AIRPORT SQUARE
ACCRA - GHANA

The One Airport Square - Accra; the first GREEN Star certified building in Ghana, a mixed-use development in the growing commercial district of Airport City in Accra, comprising 15,000 square metres of offices and 2,000 square metres of retail.



WORLD BANK IFC HEAD OFFICE
ACCRA - GHANA

World Bank / IFC Head Office Ghana – is an EDGE Certified edifice; Lambert executed this landmark eco-friendly structure which exhibits unique technological systems with high performance of complete Electrical and Mechanical works.



ALPHA ONE TOWER
LAGOS - NIGERIA

ALPHA 1, Eko Atlantic City, Lagos - Alpha 1 is a new office development in the Marina District of the new Eko Atlantic City, a coastal city on Victoria Island adjacent to Lagos. The office features 14 floors of open offices, a basement and a car park; complete MEPF executed by Lambert. Alpha 1 has received final EDGE certification



PORt OF TEMA EXPANSION - GHANA

Tema Port – Terminal Three, by MPS Ghana - The Meridian Port Services (MPS) Tema Port connects Ghana's shipping industry to the rest of West and Central Africa. This ambitious expansion now accommodates larger ships and improve the harbor's facilities and equipment, all while focusing on resource efficiency. The EDGE-certified Terminal Three consists of three separate buildings that include a workshop and maintenance building, offices for administrative purposes and offices for the port's authorities.

IVOIRE TRADE CENTER (ITC) COCODY, ABIDJAN - CÔTE D'IVOIRE

The Ivoire Trade Center (ITC) is located in the heart of Cocody Ambassades. This center is an EDGE certified, exclusive business unit with 13,120m² of offices and 4,000m² of surface area. Lambert Electromec is proud to have executed the complete Electrical and Mechanical works and features of this ITC Cocody Ambassades in Abidjan.



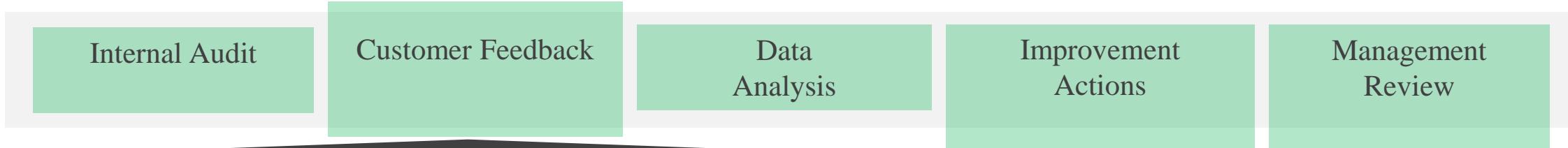
THE HERITAGE PLACE, LAGOS - NIGERIA

The Heritage Place - Lagos, the first LEED accredited building in Nigeria. It comprises of 15,736 sq m of office space over eight floors, the large floor plates offer great flexibility and efficiency to the modern occupier and are fitted to internationally recognized Grade A standards.

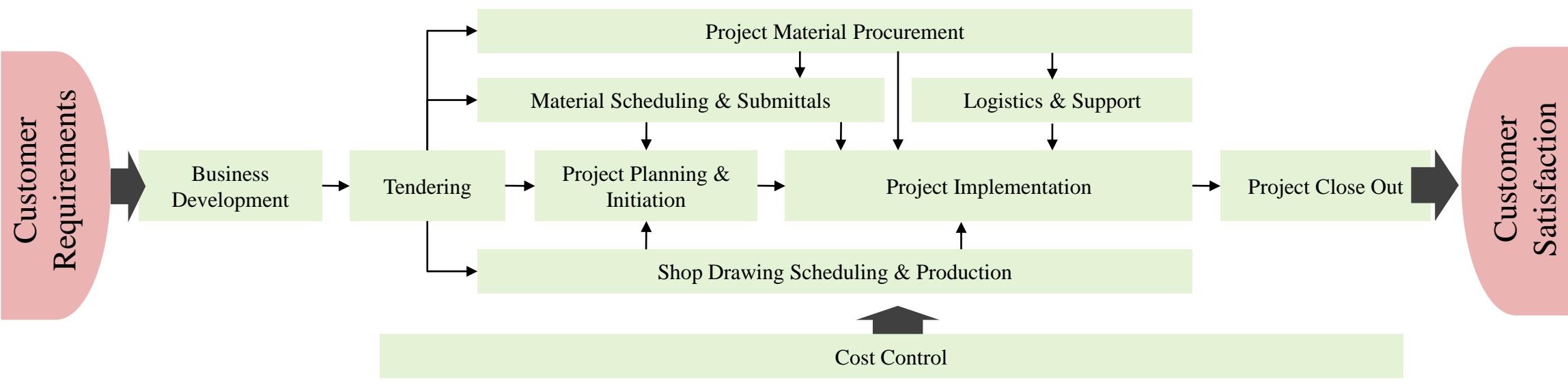


PROCESS MAP ARCHITECTURE

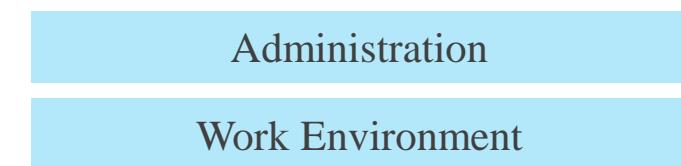
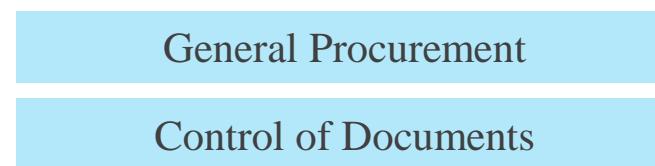
Management Processes



Operational Processes



Support Processes





MANAGEMENT OF QAQC

Lambert Electromec is committed to ensure that our products/ services consistently meet customer needs, requirements, and specifications, through conscious participation of all employees in the process of continually improving the effectiveness of our quality management system.

ISO CERTIFICATION

ISO 9001:2015 is an international standard dedicated to Quality Management Systems (QMS).

It outlines a framework for improving quality and a vocabulary of understanding for any organization looking to provide products and services that consistently meet the requirements and expectations of customers and other relevant interested parties in the most efficient manner possible.

ISO 14001: 2015 is an internationally agreed standard that sets out the requirements for an environmental management system. It helps organizations improve their environmental performance through more efficient use of resources and reduction of waste, gaining a competitive advantage and the trust of stakeholders.

ISO 45001:2018 specifies requirements for an occupational health and safety (OH&S) management system, and gives guidance for its use, to enable organizations to provide safe and healthy workplaces by preventing work-related injury and ill health, as well as by proactively improving its OH&S performance.



QUALITY ASSURANCE AND CONTROL PROCEDURE

PURPOSE AND SCOPE

The purpose of this procedure is to describe the Quality assurance - Quality control activities on site. It begins following a project award when a quality plan is to be developed and method statements for project systems are needed.

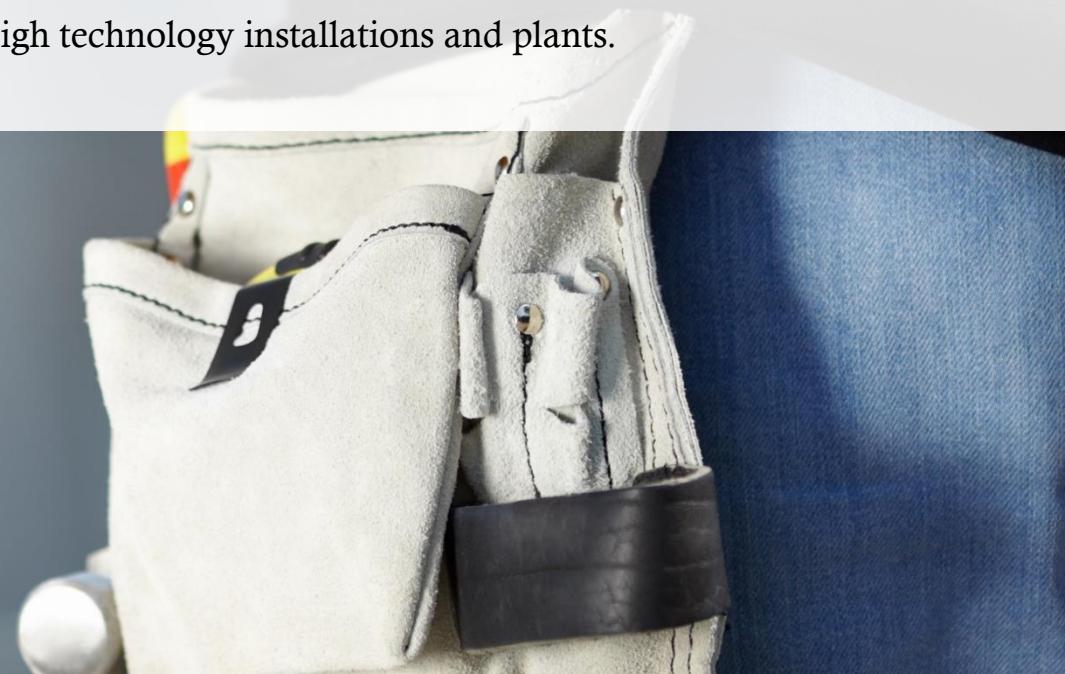
This procedure aims to ensure first that a proper internal inspection is performed regarding material received, products installed and documents implemented to make sure everything is running according to client's need, and company's procedures, policies and regulations. Secondly it makes sure that inspections of works installed are done and approved by the client. The activity ends whenever Snags have been treated, cleared and closed.





MANAGEMENT OF HSE

Lambert Electromec has a Health, Safety, and Environment (HSE) policy that conforms to international standards. It is totally committed to the concept of building safety into the design of high technology installations and plants.



HEALTH, SAFETY AND ENVIRONMENTAL PROCEDURE

PURPOSE AND SCOPE

Everyone has a duty to take reasonable care of themselves and those around them through zero tolerance of unsafe practices. We must therefore all work together to prevent accidents, ill health, environmental damage and the hardships that follow.

Both Lambert Electromec Ltd Health and Safety Policy Document and the Environmental Process states that specific responsibilities for health, safety and environment will be clearly set out for guidance. This section lists both specific responsibilities and general functional responsibilities.



Supervisory and management levels and the titles used, vary across Projects and Contracts. Therefore, the responsibilities listed may need to be redistributed, enhanced or amended to take account of the size and composition of the management team. Additional duties relevant to a specific Area or Project may be spelt out in the appropriate Safety or Environmental Plans.

Where duties and appointments are not delegated or made by the accountable manager, then by default, they will rest with that manager.

