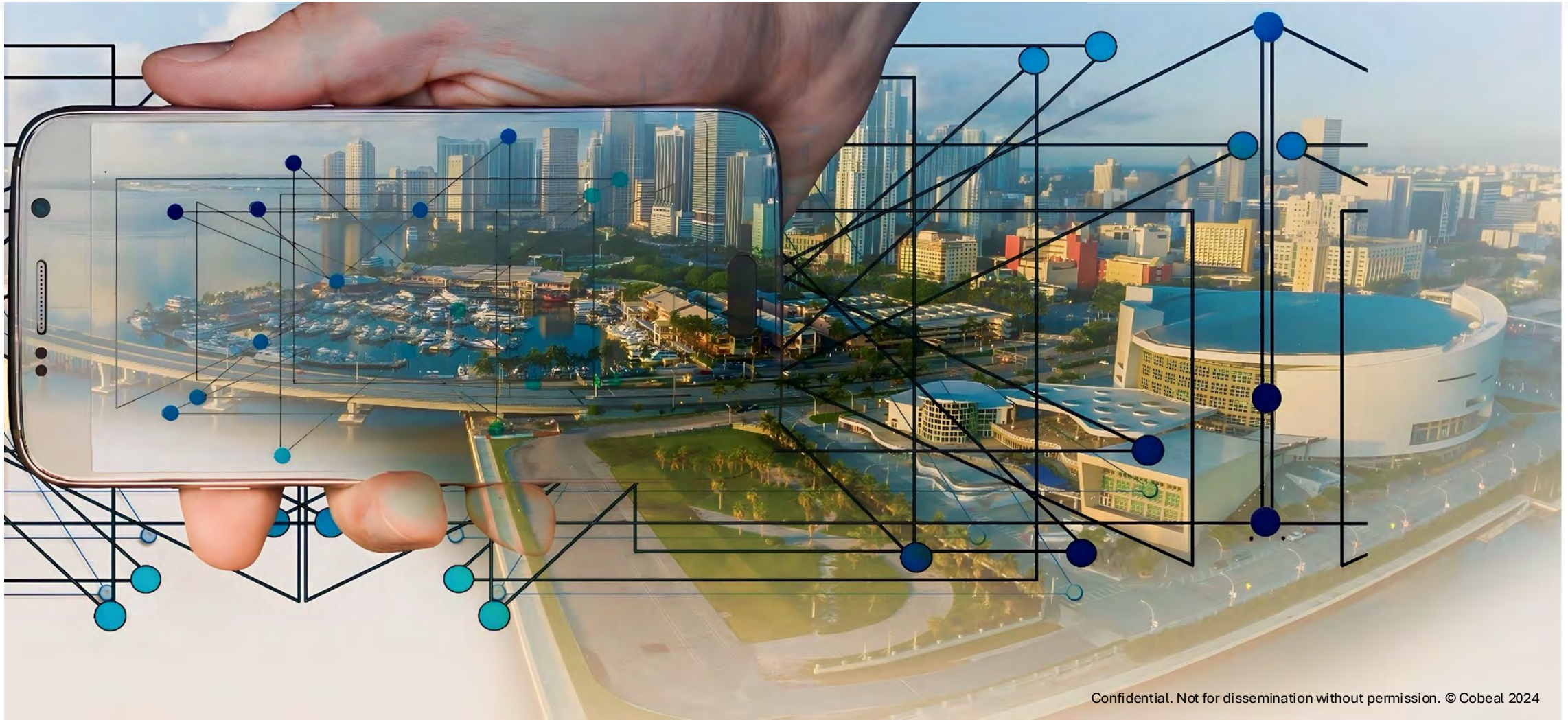
Onshore Corporate Presentation

January 2024



Onshore Corporate Presentation

April 2024

Mission

- To engineer and construct state-of-the-art facilities that advance human progress.

Vision

- To set the global standard for infrastructural innovation, creating spaces that safeguard our heritage, enhance health, and empower industries, while preserving our planet for future generations.

Goal

- To forge partnerships across sectors, applying our multidisciplinary expertise to build environments that are at the forefront of technology, safety, and environmental design, meeting today's needs and anticipating tomorrow's challenges.

Values

- Innovation
- Diversity in Expertise
- Health and Environment
- Quality and Durability
- Adaptability and Resilience
- Ethical Responsibility
- Sustainable Development

Group Profile

Cobeal is a leading master planning and turnkey construction services provider of fully integrated and innovative Engineering, Procurement, Installation, and Construction (”EPIC”) solutions to 16 critical sectors, including commercial facilities, energy, food and agriculture, healthcare, and critical manufacturing sectors.

- Master Planner for onshore and offshore projects.
- Turnkey Project Management Services for private, public, and government entities.
- Engineering and Detailed Design for 16 critical sectors.
- USA, Mexico, Asia, Europe, Canada, Middle East.
- 60 years in business.

Global Presence

The Cobeal Group of Companies has been established in Latin America and the Caribbean since 1963. We service some of the world's largest multinational companies in 16 critical sectors.

Mexico

South America

Our Clients

National Archives of Mexico City

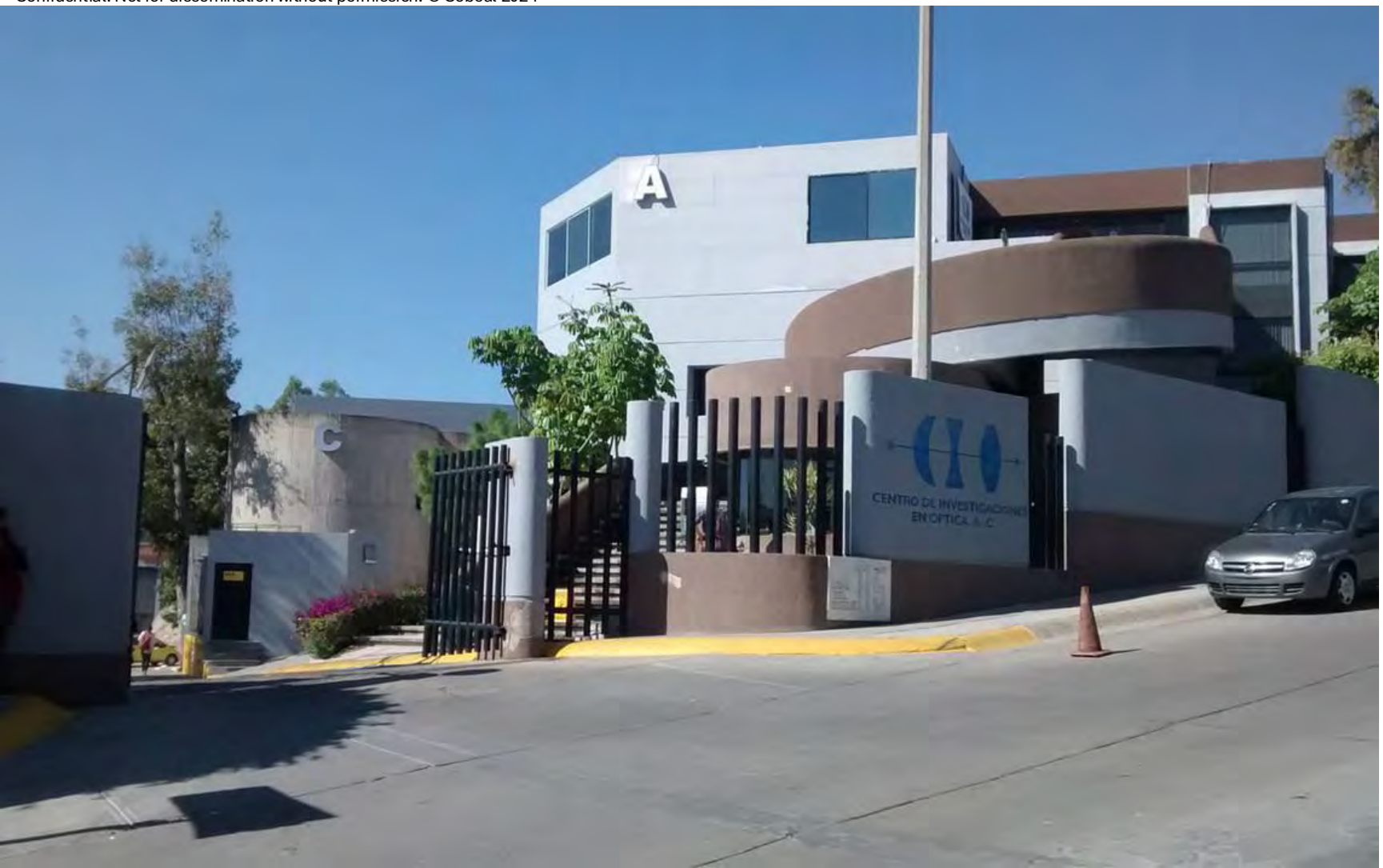
Preservation Facility
National Archives of Mexico

- Turn-Key, Full-Scale Construction.
- Construction of a climate-controlled building for the safe preservation of photography and archives, transformers, and substations, including electric and utility works.
- Complex engineering and design work for high-risk flood and earthquake zones (the area is sinking).
- Plan for handling construction waste in an environmentally friendly manner.
- Integration of environmental controls and technology for preservation and security.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Archive of the Nation, Dominican Republic

Cleanroom Facility for Optics Laboratory / CIO



ISO 7 & ISO 8 Facility for Centro de Investigaciones en Optica

- Turn-Key, Full-Scale Construction.
- Construction of an ISO 7 & ISO 8 cleanroom facility for optics research & development.
- Strict provisions to safeguard the local environment.
- Designed, installed, and tested lab, HVAC, dehumidifiers, and exhaust systems.
- Special Permits for high-demand, high-voltage transformer and substation.
- FF&E.
- Use of sustainable construction materials.
- Plan for handling construction waste in an environmentally friendly manner.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Lawrence Livermore National Ignition Facility
- Instituto Politécnico Nacional, Marine Laboratory Sinaloa
- ININ, Mexico Institute for Nuclear Research
- Centro Nacional Para la Salud de la Infancia y la Adolescencia (CeNSIA)

Façade Restoration and Museum Exhibition Spaces

Palace of Fine Arts Museum, Rojo Mexicano Exhibit

- Turn-Key, Façade restoration & environmental systems.
- Dehumidification for exhibition rooms.
- Use of sustainable construction materials.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Frida Kahlo Museo
- Fundacion ICA
- Fundación Jumex, Andy Warhol Exhibit
- Fundación Televisa
- Instituto Nacional de Antropología e Historia
- Gobierno del Estado de Oaxaca, State Museum
- Gobierno Monterrey, Nave Lewis Expo Building
- Museo Álvarez Bravo
- Museo CD-MX
- Museo Historico Nacional
- Museo Arte Moderno

Music Rooms and Concert Hall

Ollin Yoliztli Music Rooms and Concert Hall

- Turn-Key, environmental systems 12,000m^2
- Architectural/construction acoustics, plus utilities
- IAQ Auditorium lighting, audio-visual spaces
- Main collector for storm water, redirect to underground aquifer
- Use of sustainable construction materials.
- Compliance with health and safety standards, including training for all workers and staff involved in the project.

Related Projects:

- Facultad de Arquitectura, UNAM
- Facultad de Medicina, UNAM
- Instituto Esteticas, UNAM
- Instituto de Investigaciones Históricas, UNAM
- Gobierno Monterrey, Nave Lewis
- El Museo Universitario Arte Contemporáneo (MUAC)
- Lanies, Laboratorio Nacional de Innovacion Ecotechnolgica , Michoacan

Preservation Vault for National Monument of Guanajuato

Preservation Vault for National Monument of Guanajuato

- Full-scale, Design-Build-Install
- 300m^2 Free-standing building by historical preservation regulations
- Laboratory and archive for State School, including admin and support spaces
- Circuit breakers, spark-free cabling, Novec fire suppression, wireless alarm, smart environmental thermostats/humidistats
- 8ºC +/-2ºC, 35%RH +/-5%RH
- Moisture barriers to external and internal walls

Related Projects:

- Biblioteca Nacional Mariano Moreno, Buenos Aires
- Museo Pintores Oaxaqueños
- Gobierno de Puebla, Biblioteca Palafoxiana

Business Units

Master Planning

1. Site Assessment and Analysis
2. Feasibility Studies
3. Conceptual Planning
4. Land Use Planning
5. Transportation Planning
6. Infrastructure Design
7. Environmental Impact Assessment
8. Sustainability Planning
9. Regulatory Compliance
10. Cost Estimation
11. Risk Assessment
12. Stakeholder Engagement
13. Project Scheduling
14. Infrastructure Asset Management
15. Public-Private Partnership (PPP) Facilitation
16. Urban and Regional Planning
17. Technical Consulting
18. Project Management
19. Data Analysis and GIS (Geographic Information Systems) to inform planning decisions
20. Resilience Planning

Turnkey

1. Project Planning
2. Design and Engineering
3. Permitting and Regulatory Compliance
4. Procurement and Supply Chain Management
5. Construction and Installation
6. Quality Control and Assurance
7. Project Management
8. Testing and Commissioning
9. Training and Knowledge Transfer
10. Operations and Maintenance (O&M)
11. Performance Monitoring
12. Energy Efficiency and Sustainability
13. Financial Management
14. Risk Management
15. Health, Safety, and Environmental Compliance
16. Community and Stakeholder Engagement
17. Technology Integration
18. Handover and Documentation
19. Legal and Contractual Support
20. Post-Project Evaluation

EPCIC

1. Conceptual Engineering
2. Basic and Detailed Design
3. Front-End Engineering Design (FEED)
4. Onshore/Offshore Power Plants
5. Offshore Marine and Port Operations
6. Marginal O&G Fields Development
7. Mature O&G Field Life Extension Production
8. Project Management
9. Subsea & Onshore Pipeline
10. Green Energy
11. Fluid Dynamic Analysis
12. Structural Analysis
13. Hydrodynamic Analysis
14. Strategic Planning
15. Operational Planning
16. Tactical Planning

Turnkey Project Examples

National Institute for Nuclear Research, BSL-3

- Design, install, and build BSL-3 Facility to safeguard workers and the environment in preparing nuclear medicine. The application involved implanting traceable radioisotopes via imaging systems.
- Integrate complex facility with biohazard HVAC equipment, including cabinets, bag-in/bag-out filter systems to remove contaminated particulate filters, and gas absorbers for purifying the air in hazardous environments.

Laboratorio Nacional de Innovación Ecotecnologica para la Sustenabilidad, LANIES

- Full-scale, design, engineer, build, install, and commission direct expansion refrigeration system, and chemical dehumidification.
- The lab requires a conditioned space with 19ºC +/- 2ºC, with 30% RH, +/- 2%.

CFE Los Azufres Geothermal Facility

- Full-scale design, engineer, build, install environmental equipment for geothermal facility, remove H2S and H2SO4 from the atmosphere to protect copper wiring.
- Facility challenge included low pH waters, corroded carbon steel, corrosion cracking in stainless steels, chloride ions accelerated corrosion of metallic surfaces, resulting in pitting as well as uniform corrosion. Sulphate was the primary aggressive ion in geothermal fluid.
- High humidity and high corrosion rates required a desiccant dehumidification system to lower moisture levels (40% RH). Processing airflows at 500 CFM, unit was manufactured of fully welded, strain-hardened aluminum to ensure zero air leakage.
- An activated carbon pressurization unit was installed to provide clean air.
- Combined both equipment eliminated moisture and humidity, preventing moisture damage and corrosion.
- Required all electrical control systems to meet UL and NEC standards.

Turnkey Project Examples

PEMEX, Tamaulipas Shipyard – Seawater Air Conditioning

- Full-scale pipeline and restoration of cargo and petroleum containers.
- Our highly flexible cold-water air conditioning system was comprised of high-efficiency filters with 95% efficiency, a customized sea water pump, specialized cooling coils for ocean water / high saline water handling, a desiccant dehumidification wheel, and a high-pressure fan system, at a time when the economics and technical feasibility of utilizing seawater air conditioning to provide cooling was still under evaluation by the US Department of Energy.
- Methods for inhibiting corrosion in storage compartments, especially cargo and container compartments aboard ships where serious corrosion difficulties are encountered require critical environmental design and engineering expertise.
- The corrosion of inner surfaces contaminates substances therein, especially liquids, degrading oil cargo.
- Intervention utilizing communicating pipelines in cold-water air conditioning systems resolved the issues for this application.

GRUPO BIMBO, Food Manufacturing Facility, Mexico City

- Full-scale packaging facility for clean food processing and packaging environment.
- Design, engineer, build, and install environmental control solutions for airborne contamination, humidity control, air distribution, moisture, and ventilation; prevent the growth of microorganisms that decay food while reducing the load placed on the heating and cooling systems.
- Eliminate moisture-related problems to create a safe and comfortable environment for facility personnel.
- Reduce costs and prolong the shelf life of the product.

WARNER LAMBERT, Chiclets Confectionery Manufacturing Facility

- Full-scale packaging area.
- Design, engineer, build, and install environmental control solutions with two distinct drying requirements to manufacture gum and dry candy-coated shells.
- Desiccant dehumidifiers used to dry products, the optimal condition for the product was 120°F, 9% RH (44gr/lb) with 250 cfm airflow for 20 drying bins.
- To calculate loads, air had to be pulled into the system from the weather by the exhaust fans. There were exhaust fans in the ceiling that pulled moist air out of the building, but no make-up air system to supply treated air to the room. Pulling air from the building supply would have placed a cooling load on already overloaded systems.
- Future maintenance was simplified by not returning air to the dehumidification system after it left the bins. A 95% efficiency (MERV14) filtration system was installed to filter (remove) sticky, unsanitary sugar dust. Latent heat in the fresh air was converted to sensible heat by the dehumidifier, in proportion to the amount of moisture the unit removes.

The Cobeal Group

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THANK YOU