

# case study



Palm City Residences is a unique blend of superior high standard property and luxurious living on the southern Mediterranean. Located on the virgin coastline at Janzour, just 15 kilometers away from Tripoli, Libya. Palm City is designed with the international corporate community in mind. The concept of Palm City has revolutionized and set of new Standards in which innovative technologies, manages, monitor and provide state of art solutions to tenants.

Adopting a forward thinking approach, the developer, Mediterranean Investments Holding plc (MHI), a subsidiary of Corinthia Group of Companies, wanted all technical services to be integrated onto a unified network infrastructure to enable information exchange, operating efficiencies, cost savings and new revenue generating opportunities.

“The Largest Integration Project of its kind in Libya”



# ORION ENGINEERING BUILDING SOLUTIONS



## THE CUSTOMER

Palm City Residences sees the generation of 171. 000 square meters stretches along 1.3 Kilometers of North African coastline over the Mediterranean.

The Tripoli real estate development offers deluxe accommodation in 413 designer-finished units ranging from spacious villas to studio, penthouse apartments, restaurants, a square with 'high street' essentials including supermarket, a clinic, bank, beauty salon and various other outlets.

The City also features a private lido, a large landscape outdoor swimming pool,

four tennis courts, basketball/ football court and a club house which incorporates a health and fitness center, sauna, squash court, a number of treatment rooms and an indoor swimming pool. The design of the project allows sea views from nearly all property.

The project is a self-contained Village that caters for all day-to-day and leisure needs.

The concept implemented was to create an ultimate home away from home, and perhaps even more.



**This is one of the most technically advanced complexes,  
The level of integration being the key differentiator.**





## THE CHALLENGE

'Innovative approach' is the driving force behind MHI's vision for Palm City Residences. A new and innovative standard in integrated solutions delivering technological leisure and a safe secure environment with a measurable ROI.

Seeking flexibility, inter-operability and performance improvement, MHI wanted to integrate all the technical services for all buildings – security, building and safety management along with data, voice and video communication on one, common network infrastructure.

MHI believes convergence to be fundamental to performance improvement enabling a safer, more secure and more comfortable environment on the one hand, and lower operating costs on the other.

In order to deliver this new way of working MHI partnered with Orion Engineering to design and integrate the specified concept of a Unified Communication Infrastructure and integrated control solution.



# THE ORION SOLUTION



## THE ORION SOLUTION

The Philosophy in the client's mind, was always comfort and to create the home away from home environment to it's client. There is no better way to accomplish the feel home factor other than having your favorite TV channels shown in your own residence, no matter what nationality you are, as long as it is permitted by the present technology.

MHI could have installed Satellite Antennas all over the buildings but this would have disturbed the design and aesthetics of Palm City. Therefore they opted for a Single Master Antenna Television System (SMATV).

This was no easy job to accomplish when considering the magnitude of the project and the mixed nationalities residing at PCR.

The SMATV system implemented have secured over 1500 TV channels from only one Satellite Farm consisting of six 1.5 meters satellite antennas and two 1.8 meters to cater for all the residents desires.

The UCI also served as a Hybrid Fiber Backbone for this solution feeding 19 Feeder Pillars scattered over the city with 96 Kilometers of coaxial cables connecting the houses through to the feeder pillars.





## THE ORION SOLUTION

Security around the premises was also a major requirement.

Orion installed more than 70 cameras around the perimeter of the residence which includes infra-red cameras for night vision control looking over the coast, dome cameras with private masking around the streets of the residence, day and night cameras monitoring the peripheral walls and lift cameras to monitor any pilfering or abuses in restricted/condensed areas.

The Main Hub of the Unified Communication Infrastructure is one Communication room serving the entire Site and 19 Feeder pillars for the SMATV system interconnected to the Communication room through the UCI.

Everything is managed from a Management Suite and control room within the development.

Orion focused on the design, installation, commissioning, project management and technical support for all the building.

Infrastructure Communications Entertainment, Security and life safety applications are integrated on the network managed through ICES™ applications via one common operating platform. It means that all the different functions come together into one screen on a networked PC and a single point of control normally through a web based application.

Integration is an investment that will serve Palm City Residences many years after 2010. The smart technologies that are installed are future proof, expandability and upgrading is guaranteed without the need of changing any infrastructure.

*'It sets a whole new approach for comfort Living in developments.*



# THE BUSINESS BENEFITS

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The network supports entertainment, data exchange and information management, with automated processes happening as intended, marked performance improvement for everyone concerned.

For the public, intelligent solutions mean an enhanced living experience in a safe, secure and comfortable environment. Information pods, Wi-Fi access and improved communication coverage provides timely access to relevant information.

For the PCR community, which include residing tenants and retail tenants, benefits range from a dedicated website and , IP telephony supporting new standards of service provision and convenience to , High speed Internet access, IPTV support and conventional TV systems.

In future, residents can also utilize web based EPOS to order fast food deliveries, book venue tickets, pay bills, report faults and ordering housekeeping. In the meantime retail tenants will be able to call on a wide range of facilities management services provided by PCR.

For MHI, convergence mitigates risk and delivers a measurable return on investment. Not only is the complex center safer and more secure, it is easier to validate for regulatory compliance.

In practice it means a quick and accurate response to alarm incidents and a reduction in false alarms. Comprehensive monitoring and control also supports effective crowd control and manages people movement in the event of an emergency.



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The system allows integration of our solution with business processes such as HR, supply chain and financial systems to deliver a greater strategic control over the business.

For PCR Facilities Management Team the system provides the capability to help them solve the seemingly impossible FM dilemma and how to do more with fewer resources. It gives them the means to up productivity improvement and service provision and, at the same time, cut costs and risk."

The environment also benefits from Integration as it also reduces the development's carbon footprint. For example, support energy efficiency which will better align supply to demand, and monitor

the rainwater harvesting/irrigation systems. Lighting control configuration will automatically adjust to 'as needed'.

"Integration helps us to see the 'big picture' and quickly make sense of a lot of disparate data and act on it accordingly. It delivers the wherewithal to confidently monitor and control the PCR environment in all its operational modes."

MHI investment is also protected over time. The IT network is not only unified, it is scalable over time and distance. It supports current communication protocols and with lots of extension channels already in place, will cope with changing needs over the life cycle of the development.



# ORION ENGINEERING CONVERGED BUILDING SOLUTIONS

"High profile Integration is an investment that will protect Palm City for many years. The smart city technology implementation will set the standards for comfort living and life safety technology"

## The Orion Engineering Solutions in place at Palm City Residence

### Building Management

- Heating, ventilation and air conditioning (HVAC)
- Energy management
- Lighting controls
- Escalators/interface to third party lift management

### Security

- CCTV and digital video management
- Access controls
- Perimeter protection

### Safety Integration

- Fire detection/suppression
- Public Address Voice Announcement (PAVA)
- Interface with third party emergency lighting

### Data, Voice and Video Communications

- Electronic noticeboards/video screens
- Information pods
- Spot announcements & music linked to PA VA
- Wireless networking
- Integration with business systems including EPOS and GSM
- Private Mobile Radio (PMR)



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