



Case study

Comune di Milano

BT lights up Italy's second-largest city

When you've got to keep a mixed technology infrastructure running at optimum efficiency, it pays to have a multi-skilled partner alongside. That was the issue facing Milan when it wanted to start running council services over a new high-bandwidth optical fibre network covering the entire city.

Having proved its credentials from the start, BT was asked at short notice to take on more of the project than originally expected. The optical fibre network is now fully lit up, and managed by BT. Meanwhile wireless services are empowering citizens and enabling more flexible working for council staff.

“BT has the technical skills to make things run according to our requirements, along with the flexibility to adapt to changing circumstances.”

Guido Albertini, Chief Information Officer, Comune di Milano



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BT manages complex multi-vendor environment to maintain optimum productivity and efficiency

Partnership assures services citizens demand and deserve

The fifth-largest EU urban area, Milan has a population of 5.2 million. It's the capital of Lombardy, where 20 per cent of Italy's GDP is generated. Serving the powerhouse at the centre of that dynamic region, the city council (Comune di Milano) has consistently upgraded its IT infrastructure over the past decade.

Guido Albertini, chief information officer, says: “In keeping with our leading industrial and cultural status we needed systems and networks that would maintain that position and provide the services that our citizens and enterprises demand and deserve.”

The issue was a lack of integration between council premises, with vital applications like the citizen register, finance, and geographical information systems running in separate siloes. Comune di Milano chose to adopt a two-phased approach to the problem. First it created an optical fibre infrastructure on which to run high-speed services; then it went looking for a supplier to light up that network.

A competitive tender, conducted under strict EU competition rules, invited bids from world-class IT companies. In the event a partnership between BT Global Services and an incumbent equipment supplier was chosen but, when the latter ran into financial difficulties, BT was invited to run the entire contract. “The original partnership was

chosen on commercial terms and technical competence,” Guido explains. “BT had proved it had the financial solidarity and we chose to continue with just the one service provider.”

Highly-secure broadband fixed and wireless networks

Serving some 700 locations, four fully-redundant routers run at 20Gbps at the infrastructure's core. Meanwhile 113 edge routers carry traffic to and from the periphery at up to 10Gbps. The LANs use over 1,500 switches. Internet access is dual-served at 1Gbps from two data centres via redundant routers.

Network security uses six gateway proxy servers, three per data centre, with a three-level hierarchy of different devices for internet security. Within that there are nine firewalls and six intrusion prevention systems. Other products from the BT Assure portfolio include threat monitoring using a proprietary Sentry Device and denial of service mitigation, delivered in association with Arbor. Five call management servers – one in each data centre and a third at a police station – provide IP telephony to 12,000 IP phones.

Under the original contract, BT provided wireless services at 50 council premises, including libraries and museums. From there, Comune di Milano offers free Wi-Fi services for the public and mobile council workers by extending wireless access to 250 external sites. That expansion was part-implemented

by BT, with the council's in-house IT team responsible for the other half. Eight BT technicians provide support to the mixed technology environment from the two Comune di Milano data centres, while experts at the BT Milan office give second-line support.

The BT managed network supports high-definition video streamed from 250 IP cameras at strategic urban locations. This helps police control traffic and monitor the safety of citizens. All video feeds are digitally recorded. BT also provides a range of managed security services including intrusion detection and prevention and threat monitoring.

Redundant data centre assures resilience

Most recently, BT Advise professional services consultants worked collaboratively with the Comune di Milano IT team to specify requirements and map out the architecture for an all-new disaster recovery site, hosted at a BT data centre. This replicates the council's primary data centre with more than 100 virtual servers. It's capable of running critical core business applications like the citizen register, finance and geographical information systems.

The business relationship with Comune di Milano has been extended in other ways, too, to embrace desktop support services. Under a separate three-year contract BT is responsible for the day-to-day support of over 12,000 PCs in Comune di Milano offices across the city.

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Guido Albertini, Chief Information Officer, Comune di Milano

Comune di Milano has largely achieved a paperless working model, with correspondence and documents scanned at the point of receipt and passed from desk to desk electronically. That not only speeds-up citizen services and makes them more efficient but also delivers environmental dividends. Meanwhile critical business applications are now available to all council people who need them, improving productivity and allowing flexible working.

Against a core network availability SLA of 99.9 per cent, BT regularly achieves and exceeds that target. Guido Albertini concludes: “BT manages the network in line with our demand, with bandwidth and availability provided to agreed SLAs. This is a complex multi-vendor infrastructure and BT as prime contractor collaborates with all suppliers.”

Core services

- BT Connect outsourced managed WAN and LAN with first and second-line support of city-wide optical wired and wireless network
- BT Advise Connect – design and implementation of wireless networks at some 50 council buildings and 250 external Wi-Fi zones
- BT One Enterprise managed IP telephony
- BT Assure managed security services including: Assure Managed Firewall, Assure Denial of Service Mitigation and Assure Threat Monitoring
- BT Compute data centre services
- BT Advise Compute professional services
- Desktop services including PC configuration, change management, update and repair

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Registered office: 81 Newgate Street, London EC1A 7AJ
Registered in England No: 1800000

07/15