

Voice over internet protocol vs traditional system

Cost comparisons are based on a new office building within London, with 500 handsets/users and a conventional local area network.

	quantity	unit £	total £
Voiceover internet protocol (VoIP)			
Capital expenditure			
Internet protocol (IP) handsets (medium spec)	500	140	70,000
Gateways	2	3,000	6,000
Switches	9	2,780	25,020
Server (including software)	2	9,000	18,000
Total			119,020
Operating expenditure			
Maintenance (gateway)	5 yrs	1,500	7,500
Average office departmental reorganisation	5 yrs	-	-
Total			7,500
Total typical cost			126,520
Cost per user			253

	quantity	unit £	total £
Traditional system			
Capital expenditure			
Digital phone/handsets (medium spec)	500	180	90,000
Public exchange	2	30,000	60,000
Voice backbone	500	65	32,500
Total			182,500
Operating expenditure			
Maintenance	5 yrs	20,000	100,000
Average office departmental reorganisation (over five years)	5 yrs	12,375	61,875
Total operating cost			161,875
Total typical cost a traditional system			344,375
Cost per user			689
Total saved by using VoIP			217,855

Component	Wired network			Wireless network (wi-fi)		
	quantity	unit £	total £	quantity	unit £	total £
Switches, including cabinets	167	4,461	744,987	25	5,461	136,525
Cabling, including frames	4,000	180	720,000	430	250	107,500
Wired network card/adaptor	2,500	28	70,000			
Wireless network card/adaptor				2,500	40	100,000
Wireless access points				250	540	135,000
Power over ethernet adaptors				40	35	1,400
Wireless network management software				1	50,000	50,000
Total cost			1,534,987			530,425
Total saving of installing a wireless network in lieu of a wired network						1,004,500
Cost per user			£614			£212

Typical cable outlet rates

Cable type	Floor grid	Average run	£ per outlet
CAT6 (Copper)	2.4 m	60 m	£65-95
4-core duplex (50/125 micron) multimode (fibre)	2.4 m	60 m	£150-200



Previously ...

- 22 June Cost model: visitor centres
- 29 June Sustainability: water
- 6 July Sustainability: water

Coming up ...

- 20 July The tracker; Building Intelligence
- 27 July Market forecast
- 3 August Cost model

Data toolkit

Building's extensive database of cost data is an essential resource for anyone in the business of procuring buildings. Gain instant access to this valuable information at www.building.co.uk/datatoolkit