



## **Trends in the Video Surveillance Industry**

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Mobotix International Partner Conference (IPC) 2007



IMS Research Credentials

- Major supplier of high quality market research to global electronics industry
- >70 analysts based in UK, USA and China
- All research 100% independent
- Over 1,000 analyst hours allocated to each project
- Data collected from most of the major manufacturers and many of the minors

# IMS Research's Security Customers

Mobotix IPC 2007



Video Surveillance is Becoming Pervasive



Jamie Bulger abduction in '92



IRA car bomb in London (Ealing) in '01



7/7 London bombings

- 1. Taken at Luton railway station
- 2. Hasib Hussain leaving Boots at King's Cross



Failed 21<sup>st</sup> July London bombings

➡ Now more than 4.5 million CCTV cameras in the UK

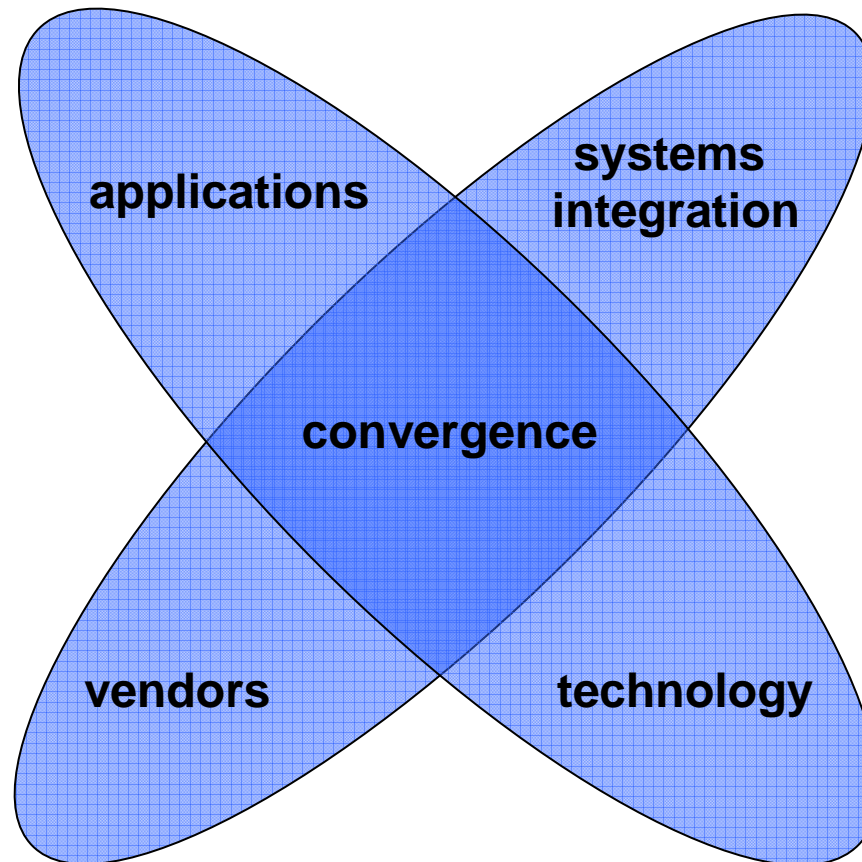
➡ Becoming pervasive on a global scale

Market Acceptance of IP Video Surveillance

- ✓ Customers are more informed & looking for added value
- ✓ Many successful large scale deployments (and getting bigger)
- ✓ Endorsement from IT giants (e.g. Cisco, IBM, EMC, etc...)
- ✓ Incumbents finally making their move (no more mixed messages?)
- ✓ Already a large, high growth market: > \$800 million in 2006

- video content analysis
- license plate recognition
- face recognition

- open platform solutions
- influence of IT co's

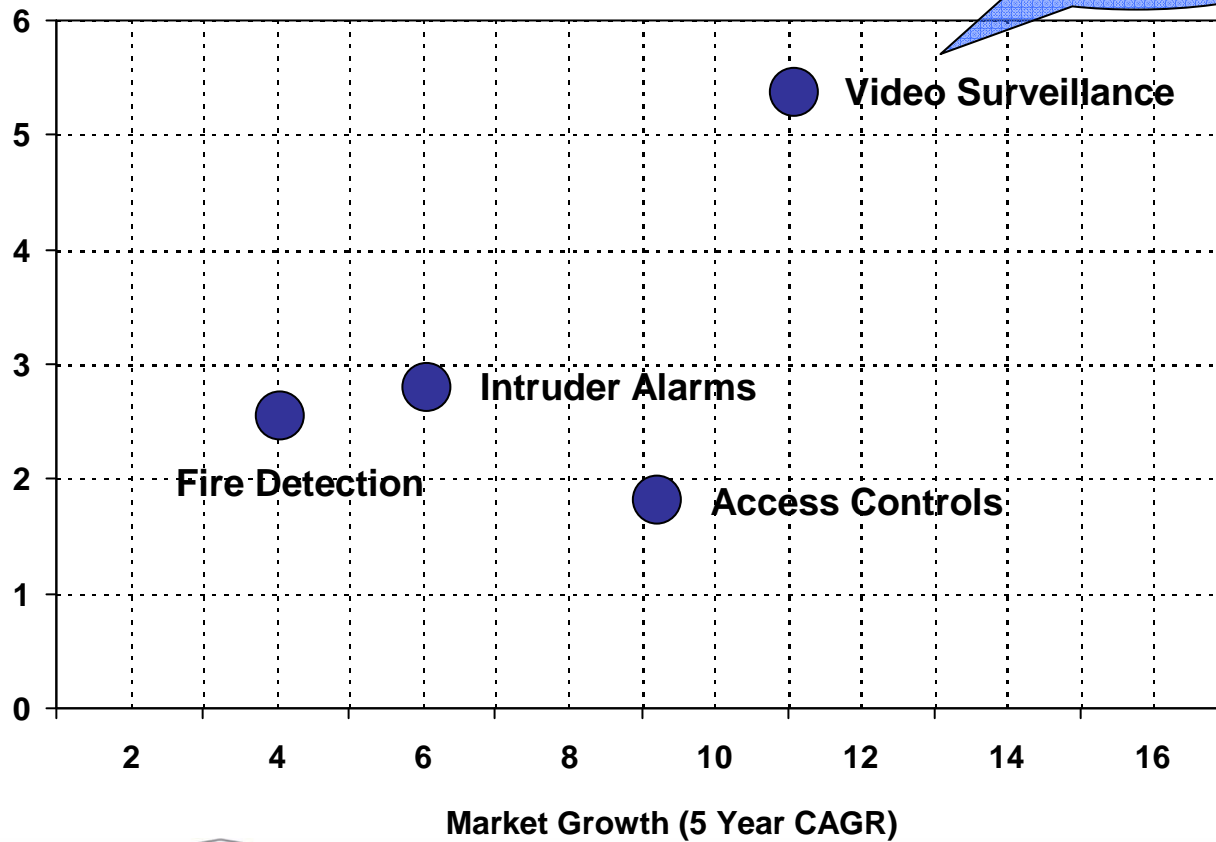


- access control & video
- fully integrated building management systems

- Hybrid analogue/IP video surveillance
- wireless mesh

Electronic Security Market = \$12.8 billion

'06 World Market Size  
(\$ billion)



Video Surveillance Timeline

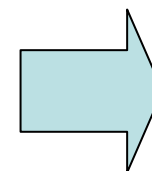
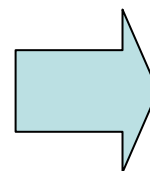
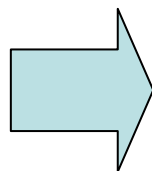
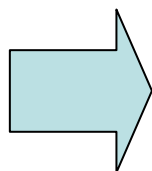
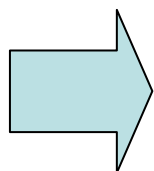
1st GENERATION:  
First CCTV  
Cameras Installed

2nd GENERATION:  
Time Lapse  
Recorded CCTV

3rd GENERATION:  
Digital Recording

4th GENERATION:  
Network Video  
Surveillance

5th GENERATION:  
Intelligent Video  
Surveillance



1950s

1980s

1990s

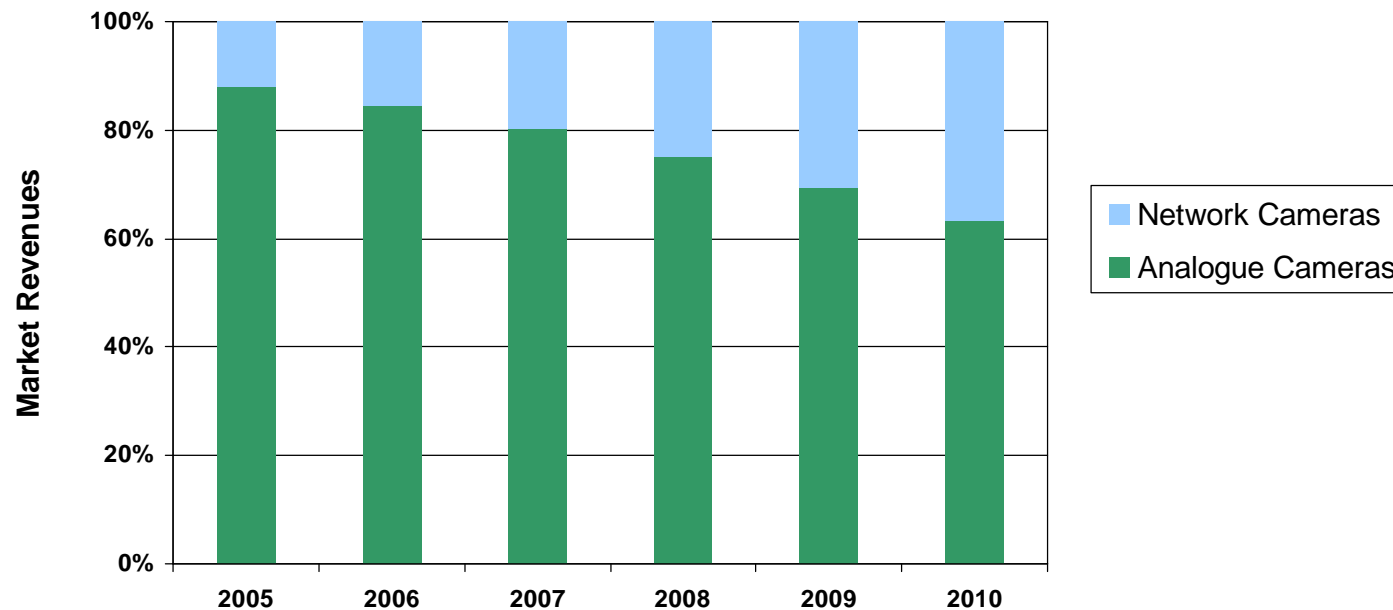
2000s

NOW!



Security Industry is Conservative

- Trend from analogue recorders to DVRs took 20 years
- Network cameras <20% of camera market



- Will intelligent IP video surveillance be different???

Source: World Market for Video Surveillance Equipment 2006 Ed, IMS Research

VCA Market Trends

- ✓ Initial hype subsiding – vendors learning to manage customer expectations
- ✓ Decentralised intelligence the dominant technology
- ✓ More product availability (and many more to come)
- ✓ Industry specific solutions with proven added-value

Intelligent IP Video Surveillance in Government

- Higher demands on security - technology must adapt
- Many systems outdated
- Reduce manpower costs



**City Centres:**

- Loitering detection
- Vehicle overstay
- Graffiti detection
- Slip and fall detection
- Bus lane monitoring
- Crowd detection
- Camera tampering



**Landmarks/Infrastructure:**

- Perimeter protection
- Loitering detection
- Graffiti detection
- Object removal
- Camera tampering



**Government Agencies:**

- Perimeter/border protection
- Tailgating through secure access
- Abandoned object detection
- Camera tampering

Intelligent IP Video Surveillance in Transport

- Omnipresent threat of terrorism
- Passenger numbers are increasing
- Higher demands on security



**Airports:**

- Perimeter protection
- Abandoned objects
- Debris on runway
- Directional alarm
- Loitering detection

**Railways:**

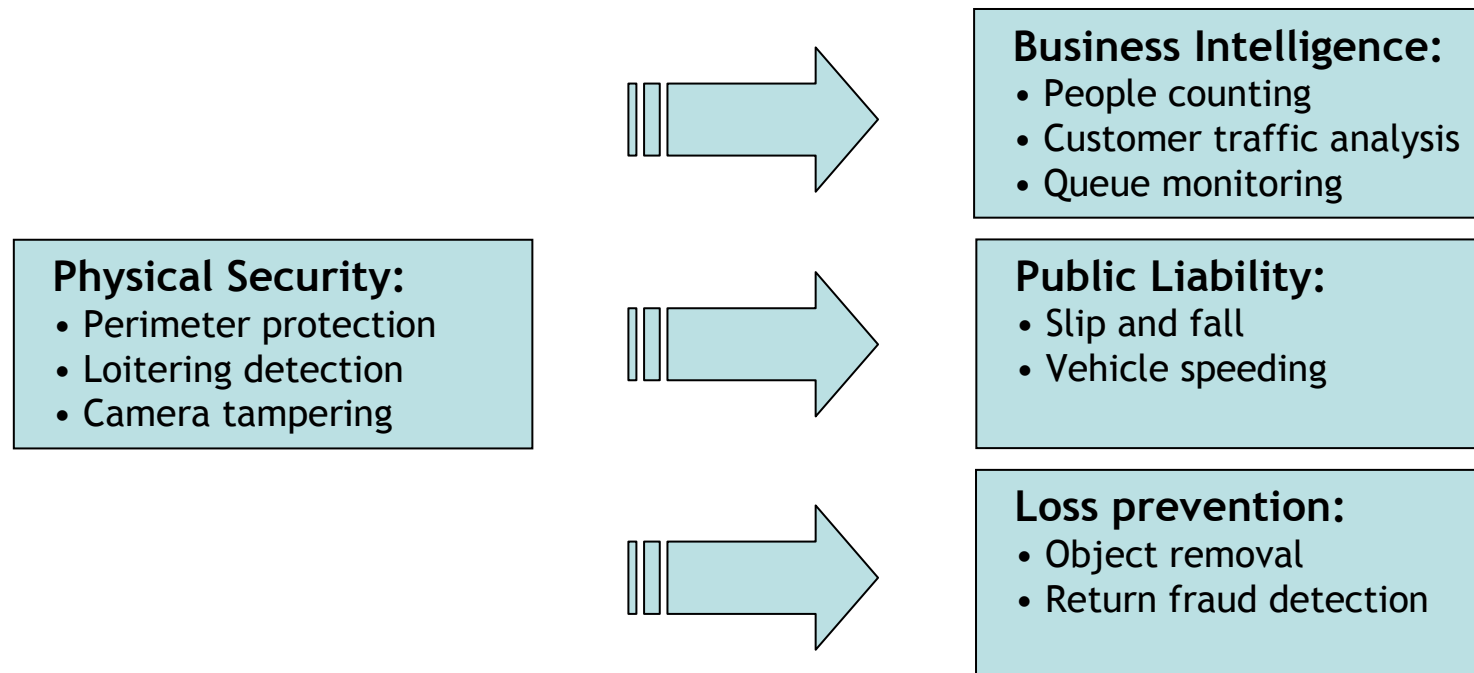
- Platform crowding
- Graffiti detection
- Track monitoring
- Level crossings
- Camera tampering

**Buses:**

- Camera tampering
- Slip and fall
- Graffiti detection

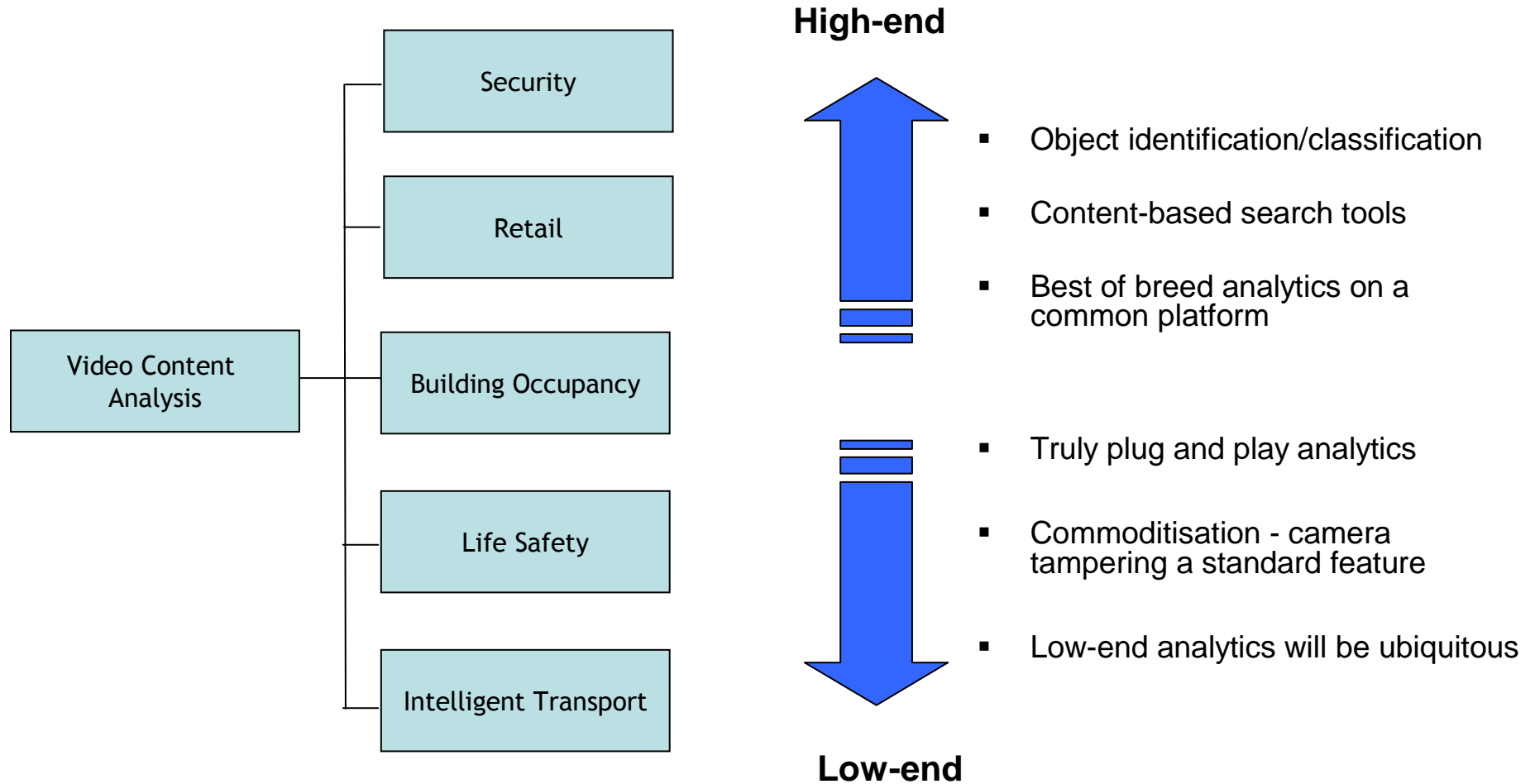
Intelligent IP Video Surveillance in Retail

- Large market for CCTV – 25% of world market
- Huge installed base of cameras
- Massive problem with shrinkage (1.61% of turnover = \$41 billion)



- But...very cost sensitive!

VCA Market Evolution

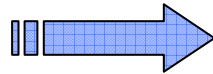


Megapixel Gaining Ground

- ✓ full field of view
- ✓ digital zoom
- ✓ 360° with fisheye lens
- ✓ possibly replace several CCTV cameras
- ✓ record all scene activity
- ? picture quality

**Challenges:**

larger file size



**Possible Solutions:**

- bandwidth & storage getting cheaper
- analytics for bandwidth management
- more effective video compression

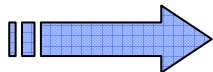
**X JPEG/MJPEG**

**X MPEG-4**

**✓ H.264 From 2008/9 ???**

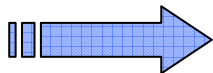
**✓ MxPEG Since 2002**

sensitivity



- better silicon, e.g. pin diode architecture

lens



- Fujinon, Tamron and CBC now have MP lenses, more to come

price



- major camera manufacturers are now entering market



Other Trends

- ✓ Dome cameras replacing boxed types
- ✓ Wireless mesh and WiMAX
- ✓ Onboard storage for cameras (e.g. CF, SD cards)
- ✓ Quality of Service (QoS)

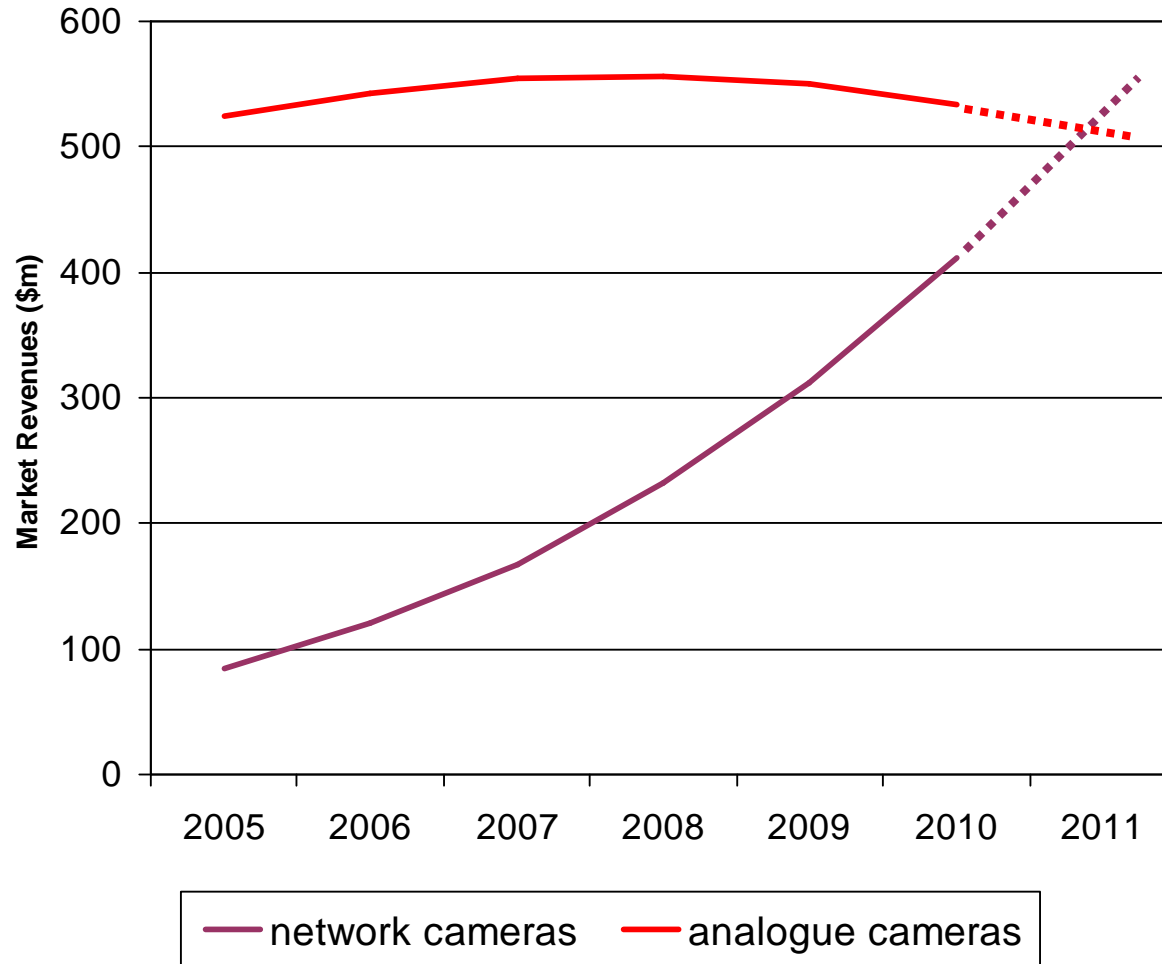


***Video surveillance is a cost conscious market – hard to sell value***

***Over-riding trend is good picture quality at the right price***

Analogue Cameras Versus Network Cameras

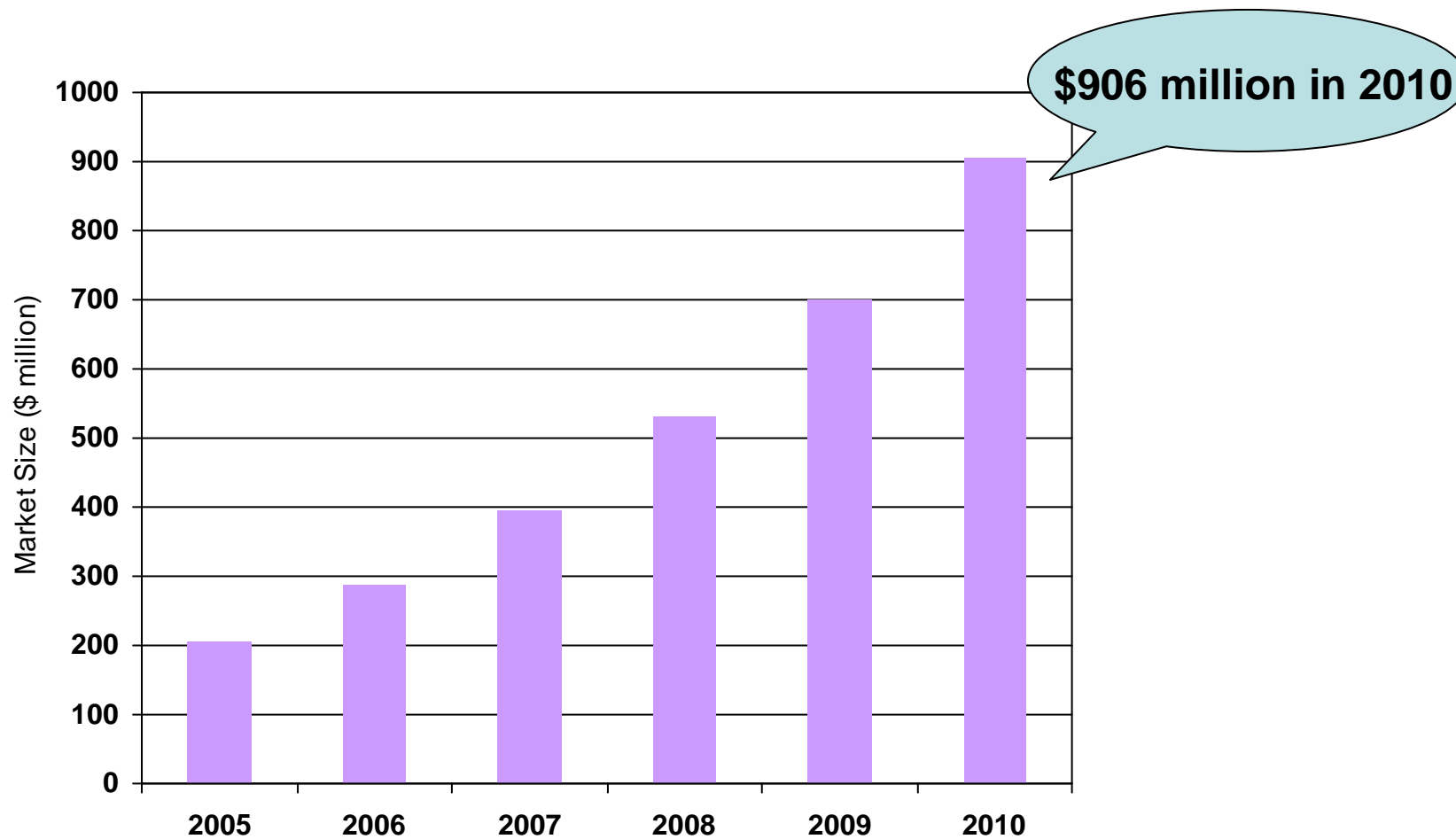
EMEA Security Camera Market



network camera market to overtake analogue camera market in 2011

Source: World Market for Video Surveillance Equipment 2006 Ed, IMS Research

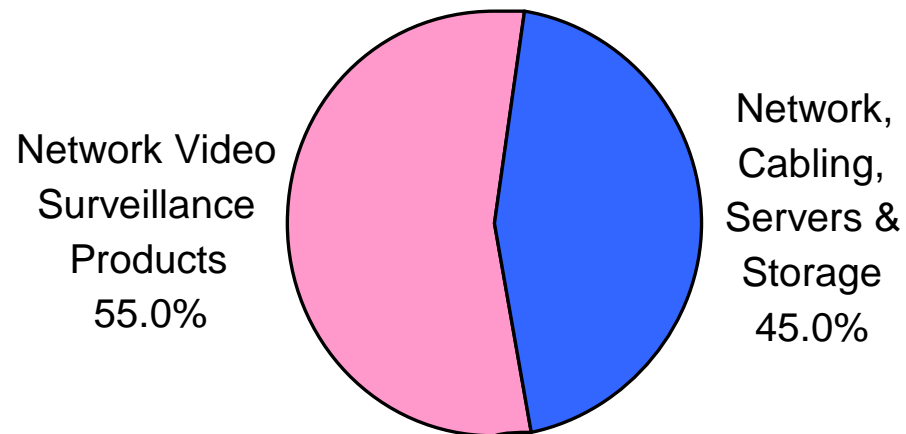
Total EMEA Market for Network Video Surveillance



Source: World Market for Video Surveillance Equipment 2006 Ed, IMS Research

Putting It All Together.....

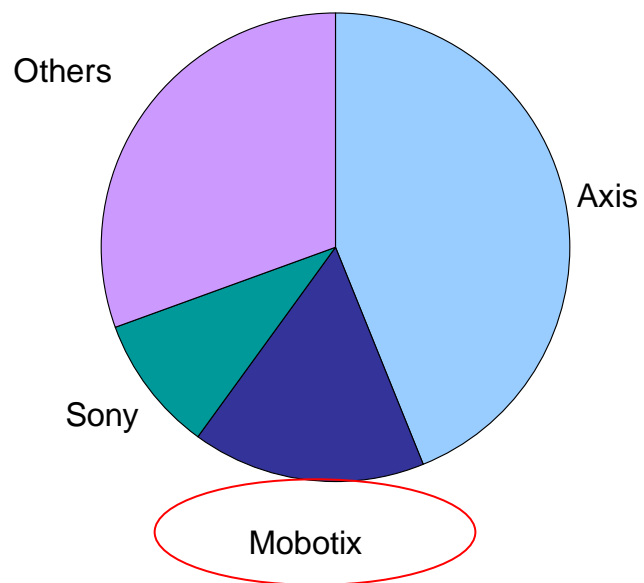
Network Video Surveillance: A \$1.6bn Market in EMEA by 2010



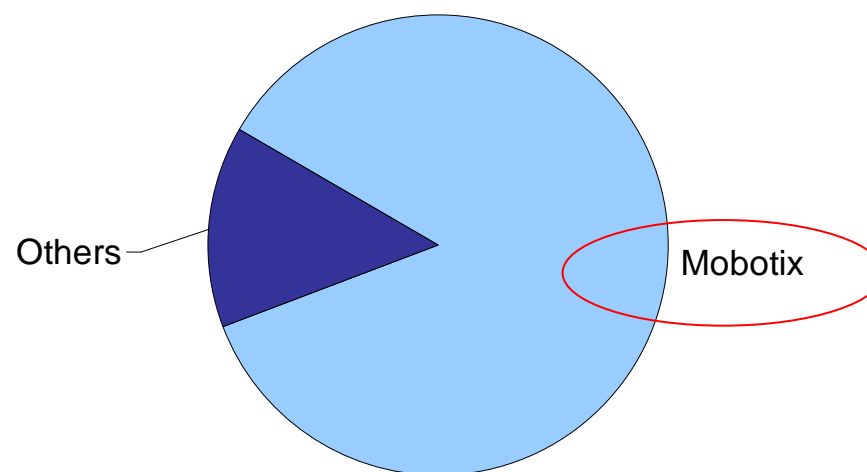
*...and don't forget the integration opportunities!!!*

Network Camera Market Shares - EMEA

Total Network Cameras



Megapixel Network Cameras



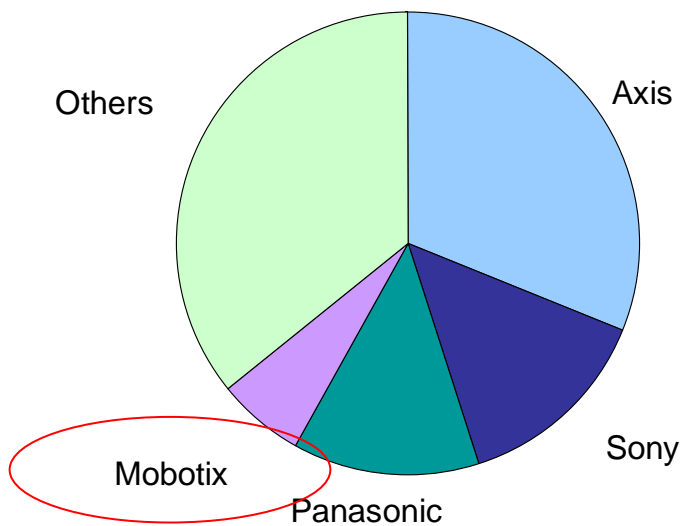
\* Preliminary Data

Source: World Market for Video Surveillance Equipment 2007 Ed, IMS Research

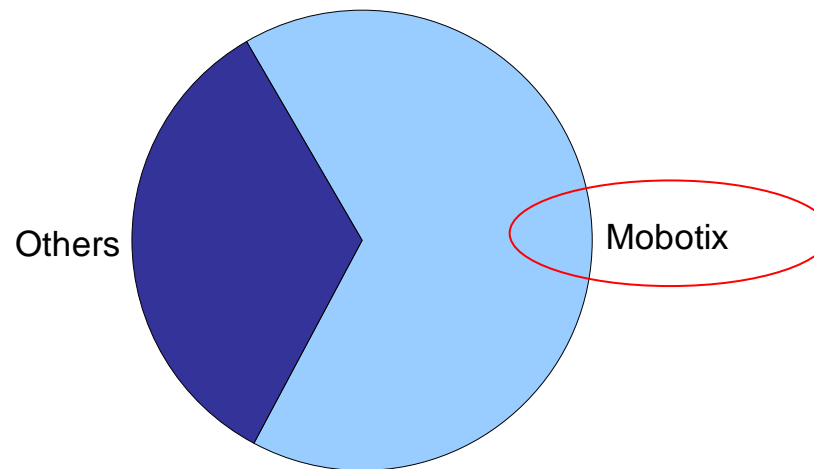
Mobotix is a Market Leader.....

Network Camera Market Shares - WORLD

Total Network Cameras



Megapixel Network Cameras



\* Preliminary Data

Source: World Market for Video Surveillance Equipment 2007 Ed, IMS Research

Conclusions

- Trend to network video surveillance in full swing
- High growth forecast for the foreseeable future
- Trends to integrated systems and video content analysis to drive additional growth
- Megapixel cameras rapidly gaining market share over standard resolution cameras
- Robotix is the world market leader for megapixel network cameras