

The Growing Use of Videoconferencing in the Healthcare Market

A Market Insight Summary
and
The 2010 Global Price Performance Award

June 2010

Abstract

- The increasing demand for the services of both public and private healthcare organizations is being driven by factors including the aging population in Western countries and the need to access remote populations from centralized facilities.
- Communications technology is playing an increasingly important role in allowing healthcare providers to extend the reach of scarce or expensive expertise, and videoconferencing technology is contributing directly in applications such as patient monitoring, consultation and counselling.
- Both healthcare organizations and videoconferencing vendors are realizing the potential in using inexpensive standard 'off-the-shelf' videoconferencing products in these types of applications, helping providers achieve immediate saving benefits, and helping vendors develop both knowledge and specialized product offers in the growing market segment.

Executive Summary

- The practice of telemedicine is undergoing significant evolution along with the advances taking place in the overall videoconferencing market. These changes are creating new challenges for videoconferencing service providers as they continue to address a market that remains highly under penetrated. For these reasons, healthcare practitioners are increasingly adopting interactive video or videoconferencing applications to deliver enhanced access to healthcare as well as to improve the quality of that care at reduced prices across the globe.
- The number of telemedicine programs around the country is growing, and they are encompassing an increasing number of medical fields. A few years back the costs of telemedicine videoconferencing systems and transmission services were a major barrier to deployments. In the last two years, equipment prices have come down dramatically while endpoint functionality, particularly video quality, has improved substantially.
- Telemedicine is unique among all videoconferencing end user applications in the fact that it involves the most critical and sensitive cases. There has been resistance from physicians, healthcare staff as well as patients due to a lack of confidence in the technology as well as due to cultural and behavioral factors. Doctors who have traditionally considered face-to-face contact with patient as a primary mode of treatment have yet to accept telemedicine as a proper standard of medical care.
- While videoconferencing remains a primary telemedicine technology, several other communication elements such as Internet communications, teleradiology and telepathology equipment, store-and-forward video or video-on-demand (VOD) are increasingly being used as primary information delivery sources for the telemedicine industry.

Executive Summary

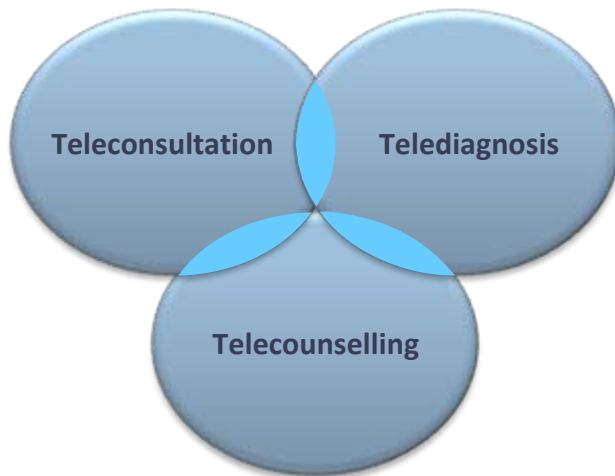
- There are still significant obstacles to full acceptance and widespread use of telemedicine technologies. However, once the obstacles are overcome, there exists a large potential for growth. The success of videoconferencing in telemedicine environments in the future will depend mostly on how well it can be aligned with the specific needs of the healthcare institutions.
- Some of the most significant benefits of telemedicine are demonstrated in its ability to extend the geographic reach of medical care and provide access to medical specialists in remote and rural areas. However, restrictive reimbursement and legislative policies are limiting the reach of existing telemedicine programs.
- Since telemedicine technology offers training and educational benefits to medical professionals and organizations at reduced costs, there is great interest in the medical community regarding telemedicine. However, there remains a resistance from traditional healthcare facilities that are unfamiliar with new technologies. In addition, many potential adopters of telemedicine are seeing resistance from their medical staff who fear that they will be replaced by new and more efficient practices brought by telemedicine programs.

The Use of Communications Technologies in Healthcare

Tele-Health

The broad scope of communications technologies applied as solutions to healthcare challenges

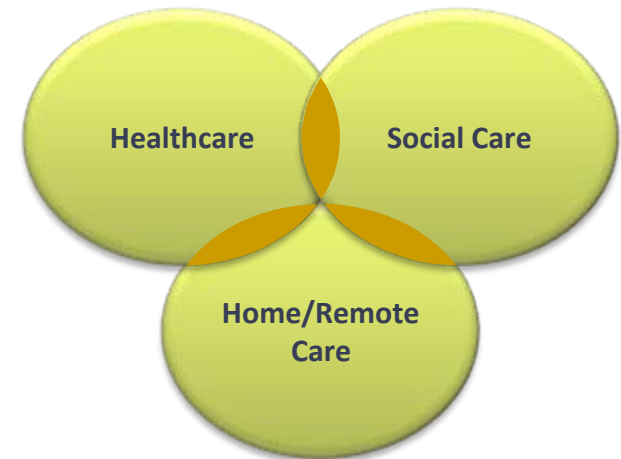
Telemedicine



Other Aspects

- Administration
- Distance education
- Research
- Healthcare asset
- Management and identification
- Patient movement and admission

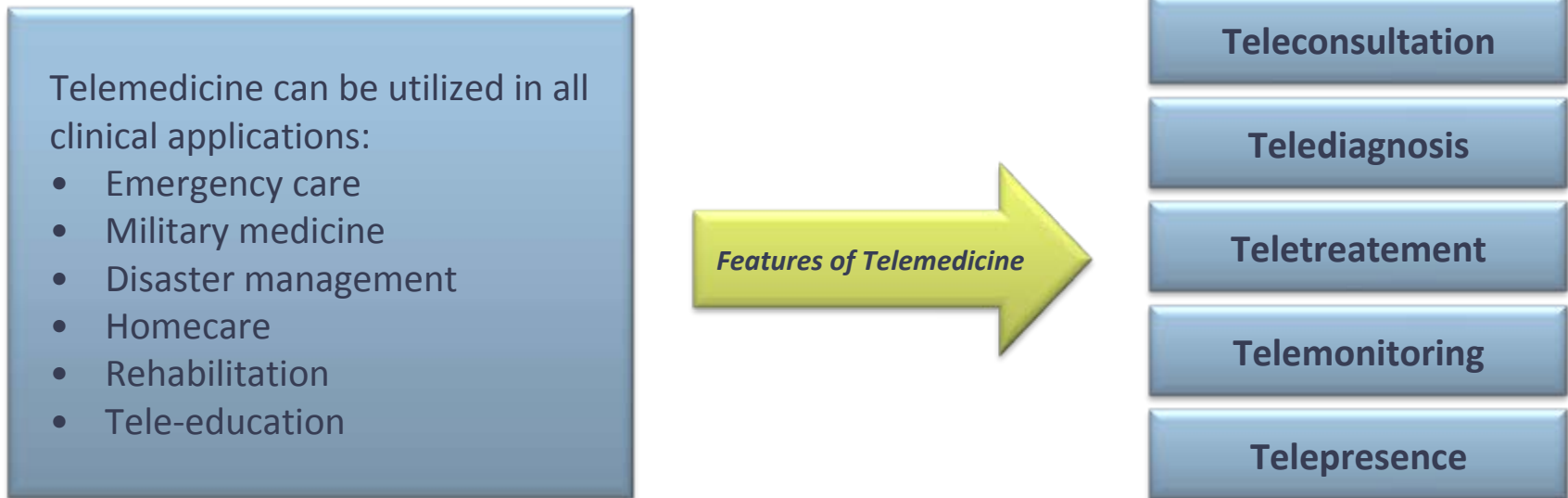
Telecare



Source: Frost & Sullivan

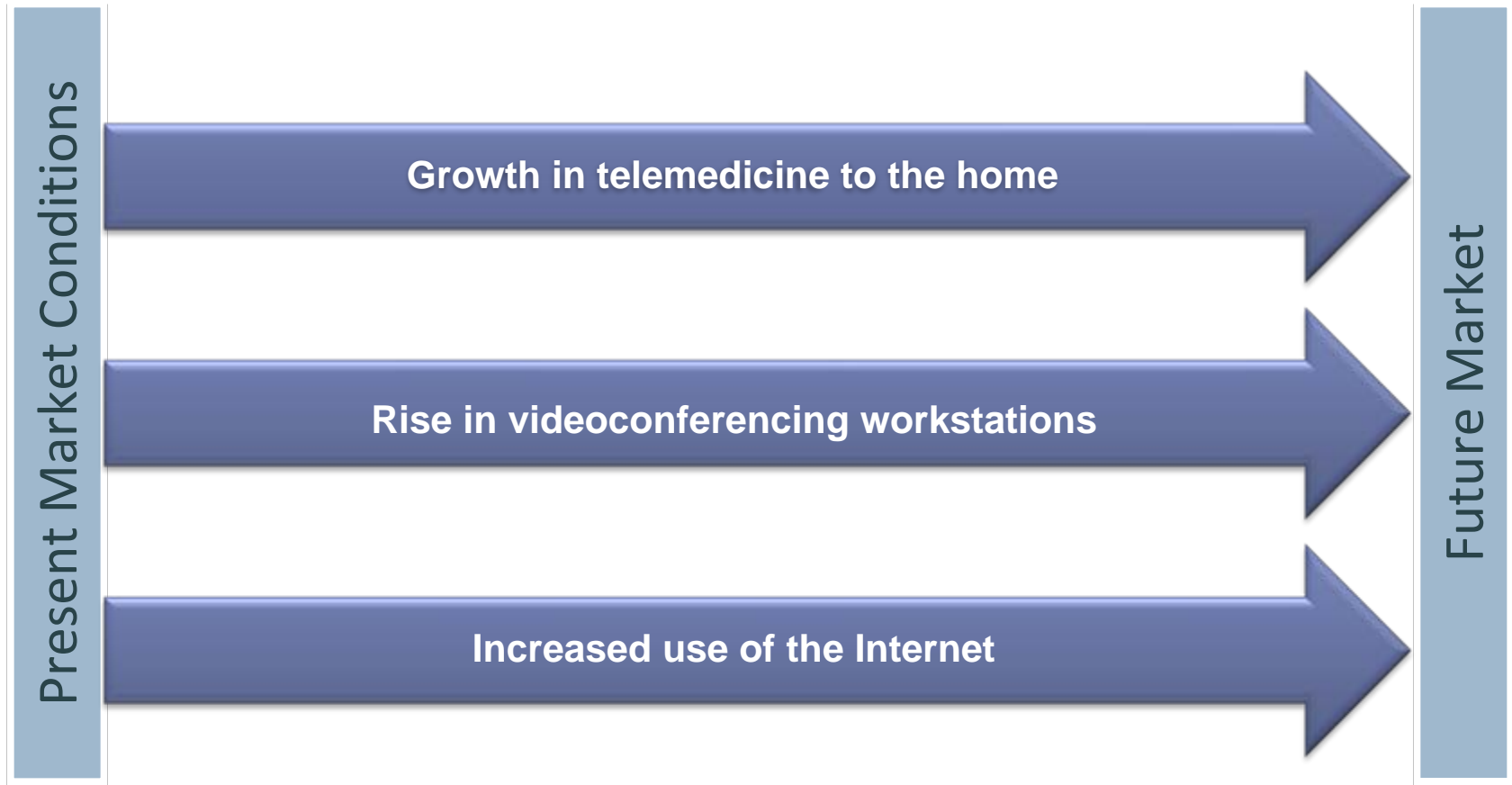
Information and Communication Technologies in Healthcare

- Telemedicine assists in the delivery of medical advice at the right place and at the right time, maximizing the effectiveness of existing expert assets. It comes as a great help to a vast majority of population with inequitable distribution of resources.
- About 60% of the world's population lives in rural areas whereas 75% of the qualified consultants practice in urban centers.



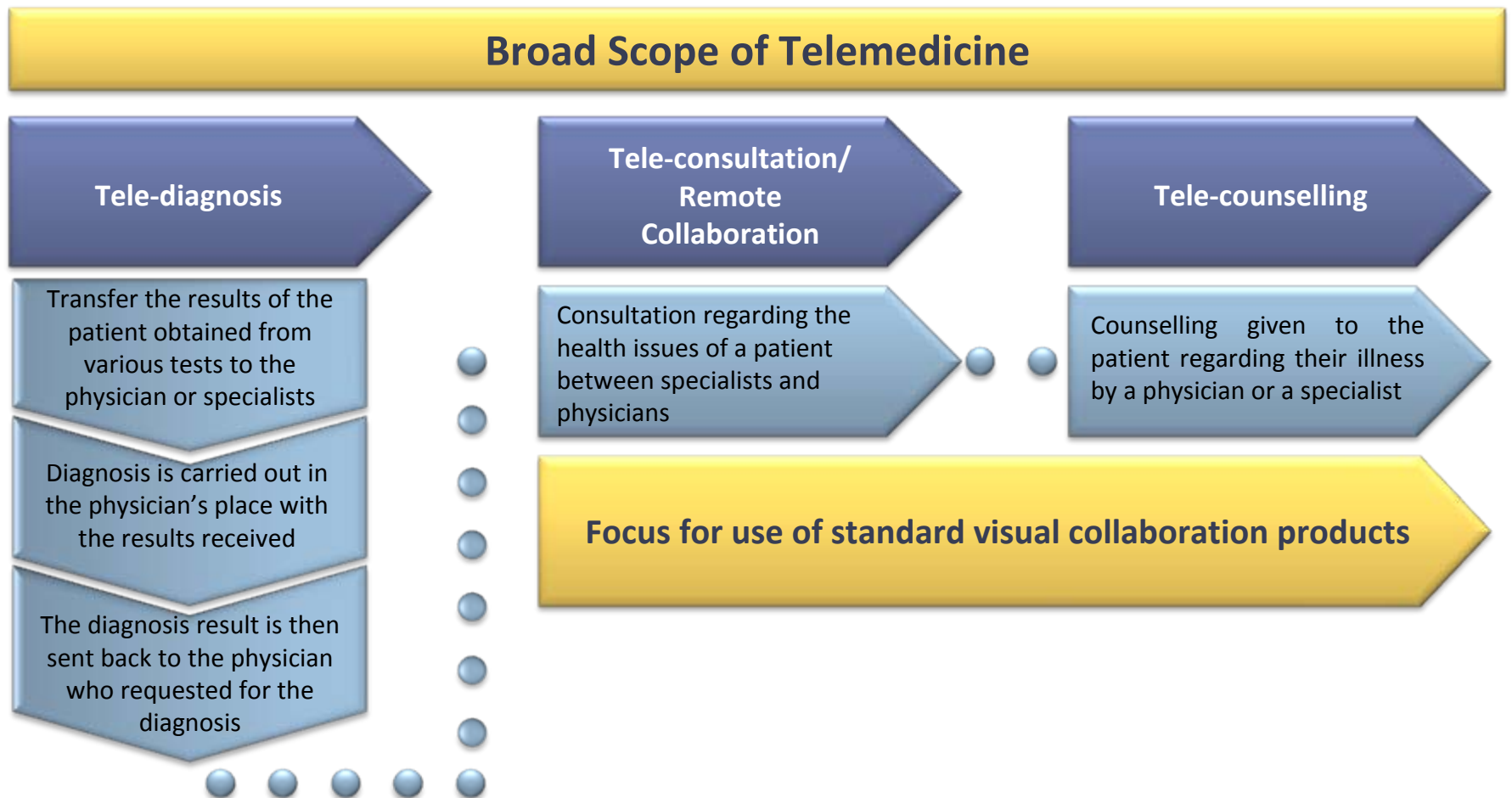
Source: Frost & Sullivan

The Developing Market for Visual Collaboration in Healthcare



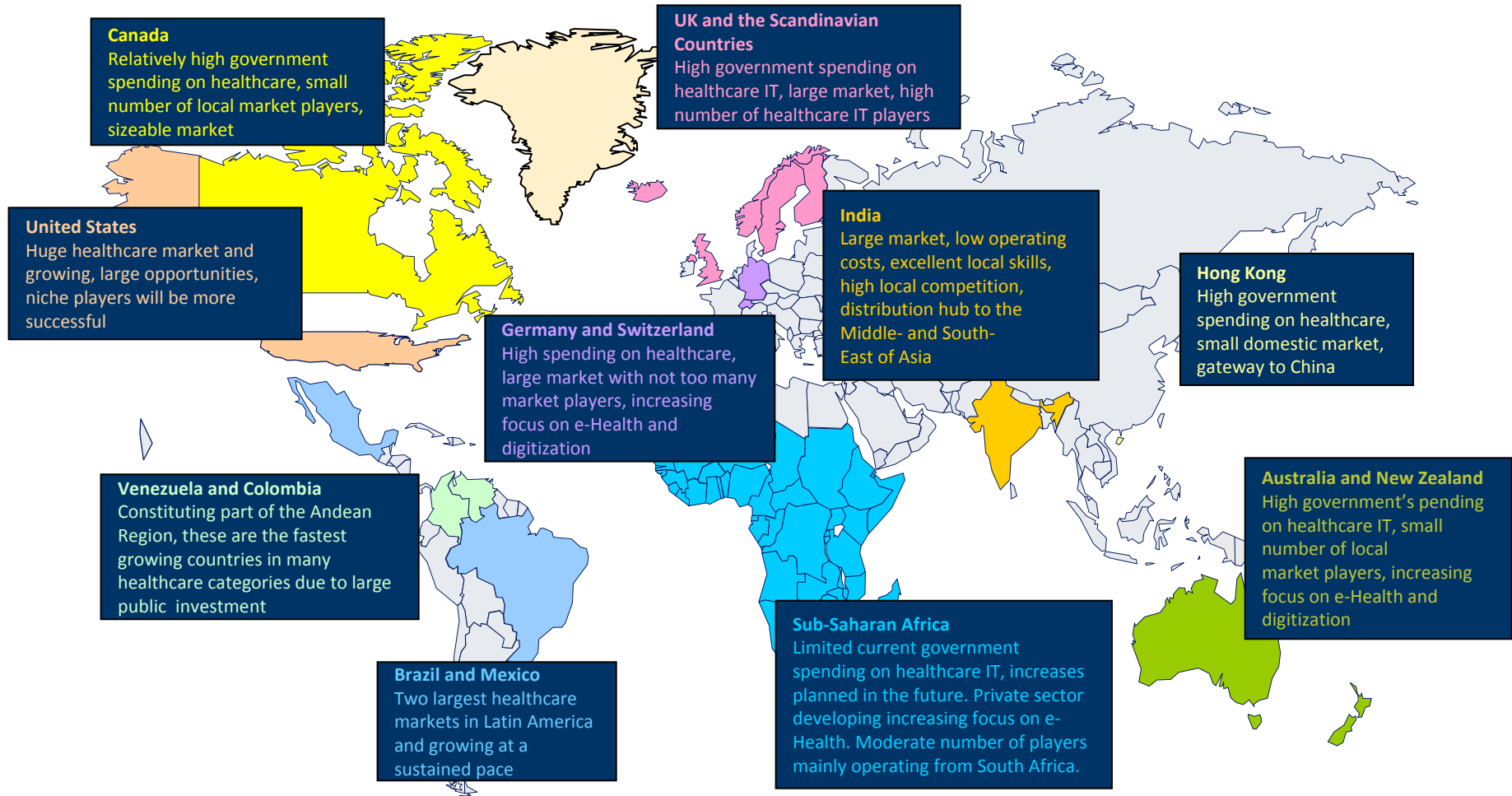
Source: Frost & Sullivan

Applications for Visual Collaboration in Healthcare



Source: Frost & Sullivan

Factors in the Global Healthcare Market

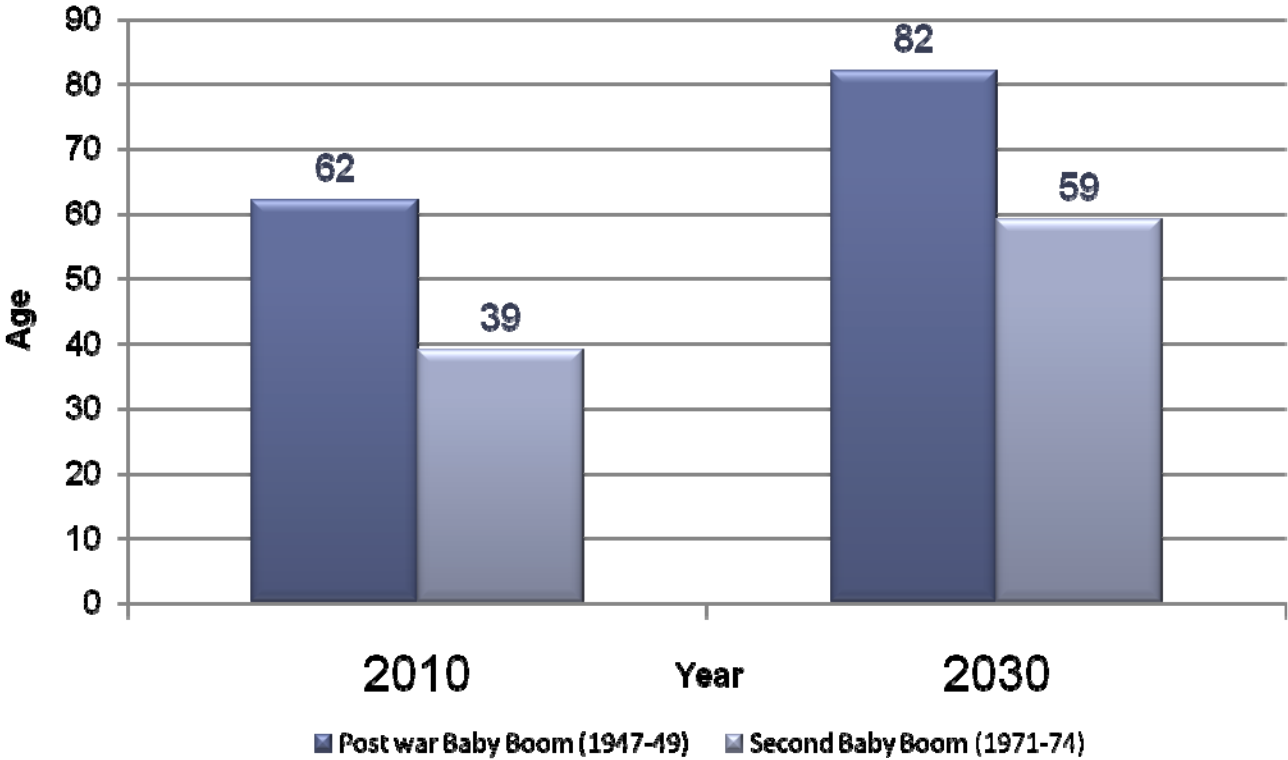


Source: Frost & Sullivan

The Aging Population

- In 2010, over 516.2 million people globally were aged 65 years and above and this is expected to rise to 1.00 billion by 2030.
- That is 1 in every 8 people would be aged above 65 years by 2030.
- The people aged 85 years and above are the fastest increasing population group.
- The percent of elderly population will continue to increase rapidly until 2020, but will stabilize thereafter.

Visual Collaboration Applications in Healthcare:
Ages of Baby Boom Population (World), 2010 and 2030



Source: Frost & Sullivan

LifeSize Videoconferencing in Healthcare

- As a leading provider of visual collaboration solutions LifeSize serves a broad range of industries, including the healthcare sector.
- The intuitive, color-coded remote control and onscreen menu of the LifeSize products enables non-technical users to use these systems without the need for training or IT assistance.
- The benefit of this simple operation of LifeSize tools and its impressive price-performance is appealing to healthcare professionals, who - thanks to the access to visual collaboration systems - can reach out to more patients in remote areas and are able to indirectly reduce costs of hospital stays. These tools also enable doctors to continue their medical education without the need to physically attend seminars.
- The LifeSize products used by healthcare professionals include LifeSize Room 220 series that comes with an embedded 8-way Continuous Presence MCU that shows 4 visible sites, LifeSize Desktop, delivering HD quality video conferencing from a personal computer, and the LifeSize Passport series that provides an HD-quality video over as low as 1 Mbps.



LifeSize Room 220 Equipment;

LifeSize Passport

LifeSize Desktop;

Source: LifeSize

2010 Global Price Performance Leadership recognizes LifeSize Inc.

Key Industry Challenges Addressed by Price Performance Leadership

- The global healthcare market is undergoing a rapid evolution, with new technologies introduced constantly. Now, conducting a surgery remotely across countries or even continents is not a dream any more, it is a reality thanks to visual collaboration technologies.
- Despite rising popularity, there are several issues that the market of visual collaboration in healthcare must overcome to achieve a wider adoption. The financial challenges involve reimbursement of funds, issues of how to pay doctors for long-term care, and how to justify the use of telemedicine in hospitals when the end result will be a reduction in hospital stays.
- Additionally, on the technology side, the telemedicine will have to be integrated with the electronic medical records, and the issues of needed accessibility and bandwidth infrastructure, as well as system interoperability will have to be resolved. Moreover, medical staff will have to be trained to be able to coordinate remote care, and will have to cope with legal liability, accreditation and licensing issues.
- The lack of interoperability between some video endpoints, poor infrastructure in certain regions in the world and a general mistrust of the technology by those who have experienced previous generations of videoconferencing and find it is difficult to use, pricey, and not matching their needs, also hinders the visual collaboration market
- In such situation, effective pricing strategies are of paramount importance, as they better position visual collaboration vendors to meet the market needs. The ability to provide visual collaboration technologies at a lower price will likely leverage their use in providing healthcare services, as more facilities will be able to afford them, and thus be more inclined to use them.



Price Performance Leadership Award

About LifeSize

- LifeSize is the first company to develop and deliver high definition video communications products. Founded in 2003 by industry veterans and headquartered in Austin, Texas, LifeSize's award winning solutions combine superior quality of experience, unique flexibility and unmatched price performance to make communicating at a distance as natural and effective as being in the same room, for anyone, anywhere.
- LifeSize became a division of Logitech in December 2009, sharing a vision of everywhere there is voice there should be video. The company has subsidiaries in Europe and Asia Pacific, and a network of channel partners reaching more than 80 countries.



Measurement of 1–10 (1 = lowest; 10 = highest)	Award Criteria					Weighted Rating
	Price	Features	Ease of Use	Service Effectiveness	Product Matched to Client Needs	
Relative Weight (%)	20%	20%	20%	20%	20%	100%
LifeSize	9	9	8	7	6	7.8
Competitor 1	6	8	8	7	7	7.2
Competitor 2	6	8	8	7	7	7.2

LifeSize Price Performance Leadership Award

Criterion 1: Price Competitiveness

- Rising interest in High Definition and immersive visual collaboration, as well as the market consolidation, are leading to increased competition among value-added resellers and equipment vendors, fuelling pricing pressure.
- To address this trend, LifeSize offers one of the most price-effective products, while at the same time providing its clients with the best performance-price ratio. These attractive-priced solutions offer not only lowest acquisition costs, but also a low total cost of ownership. LifeSize products start at \$2,499, which places them at about 1/3 of the price of their competitors' most closely matched solutions.

Criterion 2: Features

- Rising competition in the visual collaboration market drives companies to constantly fight for new customers by offering innovative features that will better suit their clients' needs. LifeSize is overcoming this challenge with providing High Definition equipment that requires lower bandwidth than its competitors' products. It is especially important in regions that face the issues of the needed accessibility and have poorly developed bandwidth infrastructure. From a HD call at 1.1MB to a crystal clear, 30 frames per second call at 384KB, LifeSize delivers perfect wideband audio quality and full motion video from 128KB up.
- One of several hindering factors that the visual collaboration in healthcare is also facing are the adoption standards, legal, cultural, administrative, financial, and technical issues. In the last case the most important is the issue of interoperability between other collaboration systems and medical devices like medical scopes, cameras, mobile medical carts, and digital stethoscopes. LifeSize was able to overcome this challenge by allowing for a seamless interoperability with the Avaya Aura unified communications platform. The platform is able to reduce costs through process integration and equipment tracking, increase efficiency of clinical staff - recoup up to 4 hours of administrative time per nurse, and increase revenue with communications-enabled admittance and discharge.

Price Performance Leadership Award - LifeSize

Criterion 3: Ease of Use

- The LifeSize intuitive, color-coded remote control and onscreen menu allows non-technical users to use the system without the need for IT staff to be on assistance. The benefit of such simple operation of LifeSize tools and its impressive price-performance is appealing to healthcare professionals. With access to visual collaboration these healthcare workers can reach out to patients at home and in more remote areas - indirectly reduce costs of hospital stays - and continue their medical education without the disruption of physically attend seminars.

Criterion 4: Service Support

- As with any technological solution, service support is an important aspect for any vendor. The case is no different for LifeSize – it provides excellent support to its clients via help desk, Global Deployment Program (GPS), remote installation, and extended warranty and advanced replacement. The service support is especially critical in healthcare services, where timely troubleshooting can sometimes mean someone's life. Worth focusing on here are the Help Desk Assurance Service program and the Global Deployment Program.
- The LifeSize Helpdesk Assurance Service program provides core services intended to provide organizations with direct phone and video access to LifeSize service and solution engineers. LifeSize has developed an expertise in troubleshooting and diagnosing the IP and ISDN based technologies. Helpdesk Assurance Service in combination with LifeSize Warranty Assurance service provides access to the latest software, knowledge base, software email notifications and the LifeSize service and support organization.
- The LifeSize Global Deployment Program is designed to remove the barriers related to global implementations including scheduling delays, higher product and installation costs and excessive coordination efforts. Without these barriers, LifeSize solutions are deployed in a timely and effective manner enabling customer's immediate return on their investment and achieving productivity benefits.

Price Performance Leadership Award

Criterion 5: Product Matched to Clients Needs

- With millions of baby boomers now retiring, technology innovators are designing and building a new market for them that will allow those senior citizens to communicate with healthcare providers and their family member from their homes. That creates a need for remote healthcare - or at least the ability to go to a medical center that supports the visual collaboration between them and the doctors.
- Because of the challenges from regulatory issues, some clients' needs remain unmet. LifeSize, like other companies, is restricted by country-level issues, as each country has different policies and regulations on implementing visual collaboration in healthcare and other sectors. Moreover, as mentioned above, the technological barrier continues to be a major obstacle, as many regions in the world have poorly developed infrastructure, preventing them from taking full advantages of visual collaboration.