



Empowered by Innovation



Innovation for Life

Communication solutions for Care and Cure



www.nec-unified.com



Four critical challenges

The following pages show how our healthcare communication solutions empower institutions, their staff and their patients. These communication solutions achieve this by placing individuals at the centre of communications in healthcare institutes, and by addressing four critical challenges:

- Enhancing the quality of care
- Optimising staff efficiency
- Enhancing the patient experience
- Controlling costs and optimising investments

“Putting you in charge when it matters most”

Innovation for life

The number one challenge for all health care providers is to continually enhance the quality of care for their patients. Yet they must also enhance the overall efficiency of their institution: patient expectation increases year-on-year, yet pressure on budgets and staff continually intensifies.

That's why NEC has used its vast experience in the healthcare environment to develop an entire portfolio of tailor-made communication solutions for healthcare professionals. Solutions that help optimise staff efficiency and reduce overall

costs, while simultaneously improving the quality of care and enhancing the patient experience.

For example, our wireless telephony solutions connect medics on the move so that they are always instantly reachable – always ready to provide expertise. This helps improve the quality of care. In addition, our Voice over Internet Protocol (VoIP) converges voice and data networks to substantially reduce network installation and maintenance costs. Just two example of how our solutions make positive impact in the everyday activities of a healthcare institute.

It is all part of our vision for communications in the healthcare environment. A vision that has helped make NEC a leading provider of healthcare communications to institutions of all types and sizes worldwide. Our proven solutions are based on innovative technology and are frequently developed in close collaboration with leading complementary solution providers.

It's an ongoing vision in healthcare that we call “Innovation for life”.

*“All parts of the **healthcare** chain need to work together to ensure patients receive **quality care**”*

Enhancing the quality of care

At NEC we fully appreciate that the quality of medical care can be greatly enhanced when staff have access to information the moment they need. That’s why our mobile tablet computers and wireless connectivity throughout the building are designed to give access to centrally-stored data and patient information directly at the bedside.

We also know that sometimes a practitioner may need to communicate with colleagues while attending to a patient. So we developed special hands-free communication devices

for uninterrupted care. These also enable practitioners to easily call in additional support when required – also without interrupting the care.

In and around the Intensive Care Unit, for example, our solutions also enhance the quality of care. Here, patients are electronically monitored and a nurse may be required at each bedside to continually monitor the equipment. But with our solutions these nurses can perform other care activities, and only need to be at a patient’s side when required. The ICU equipment is centrally monitored and the

specific nurse can be summoned only when needed via one of our hand held wireless devices.

Patients can also be given devices that call nurses in certain situations. If a nurse is needed at a specific location - to attend a medical emergency for example - an alarm can be sent to their personal device, alerting them that their presence is required. This alarm can even be tailored to specific emergencies, so that the nurse knows the nature of the call simply by the sound of the alarm.



Enhanced care solutions include:

- **Integrated Unified Communications** ensuring all parties can communicate, collaborate and access the most current information quickly and easily
- **Fixed Mobile Convergence** solutions for when staff are off-site ensuring that people remain fully integrated within the organisation's telephony network
- **Rich on-site wireless DECT** communication and integrated messaging keep mobile practitioners always within reach through a single personal number



Mobility solutions include:

- Wireless telephony applications with messaging capability
- Remote networking services to support off-site and home workers
- Web-based personal Unified Communications including:
 - Remote worker, desk sharing and presence solutions
 - Mobile messaging for technical and medical alarms
 - Voice mail and unified messaging

“Innovative mobile solutions make medical staff reachable at all times no matter where they are”

Optimising staff efficiency and collaboration

When healthcare workers are easily contacted and directed to prioritized activities, the whole organization becomes much more efficient. What’s more, contacting the right member of staff without delay is not only efficient, it’s imperative to providing the right medical treatment at the point it is needed.

That’s why our mobile solutions make staff reachable at all times via a single personal number, no matter where they are located. These solutions can also give them access to patient files while they are on the move – saving valuable seconds in an emergency. Importantly, these solutions are

highly convenient. The M155 Messenger for example, can be worn as a medallion, clip-on or wrist-watch. It enables staff to receive messages and voice communications hands-free. Efficiency and productivity are further enhanced with our integrated desktop solutions. These enable staff to deskshare, telework and collaborate more efficiently. They also make the most of valuable resources and office space.

Our solutions also ensure that all messages – voice, text, IM or video - are sent only to the people who need them. This minimises information overload to already very busy

professionals. We also have solutions that can monitor staff availability around the organisation, via presence detection. This gives instant visibility on key people’s availability, allowing an informed decision as to when and how to make contact with a colleague.

And it’s not just efficiency within your own institute that we help optimize. The efficiency of communication with other organizations will also be enhanced, that’s because all our solutions for the healthcare industry are built on open standards, which means you can share data files, research results and archives effortlessly.

“My number follows me so my loved ones can reach me 24/7 wherever I go”

Enhancing the patient experience

In addition to quality care, healthcare institutions must also provide their patients with a comfortable, welcoming and friendly experience. And our communication solutions make a positive impact on the patient at every level of the patient experience – starting with the initial call.

Many organizations face tens of thousands of calls per year from patients and their families – the vast majority of which can be handled by our automated call response systems. But when a caller needs specific advice, our advanced call handling solutions integrate with other hospital systems so

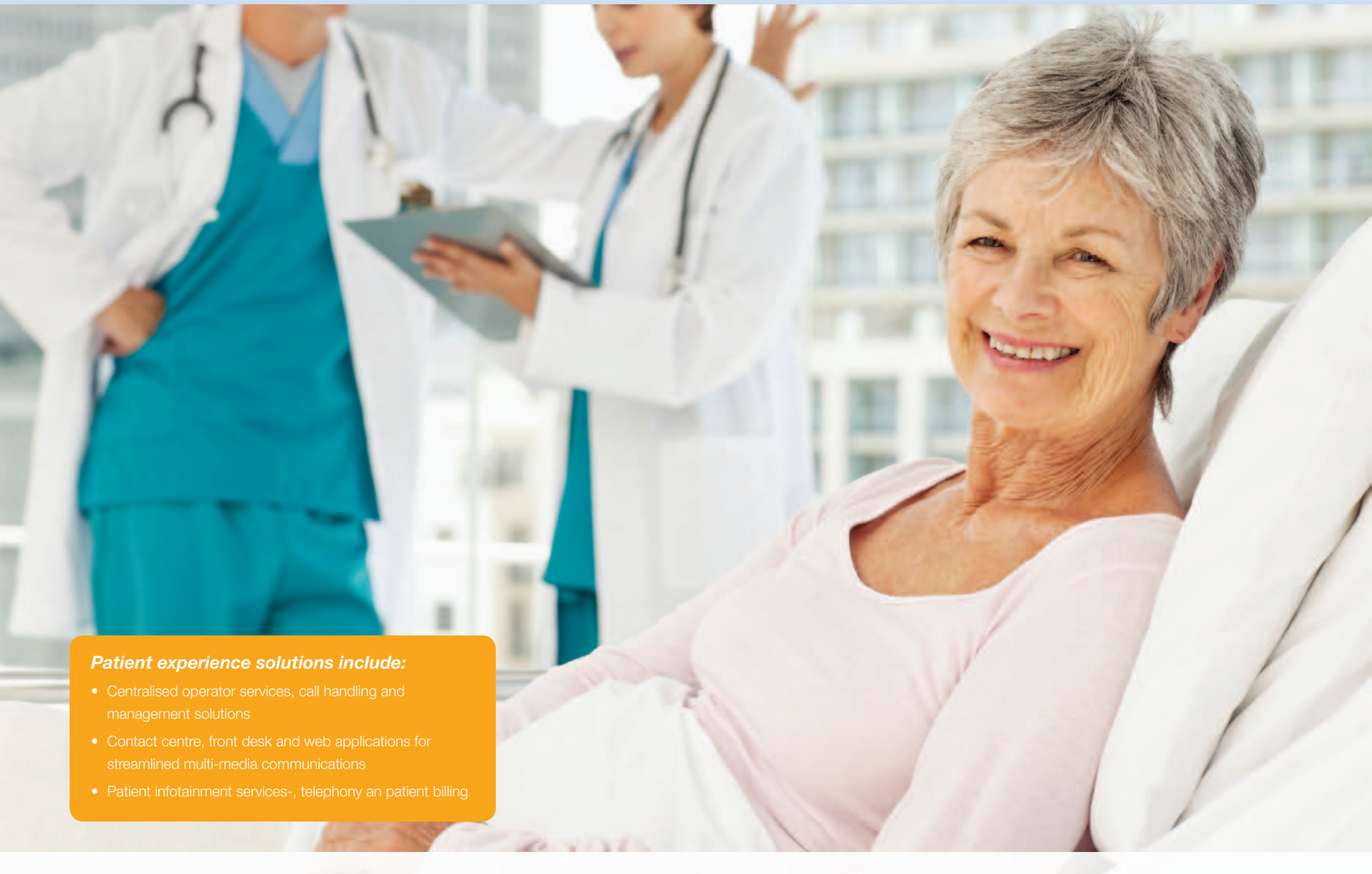
that staff can instantly access relevant patient information when a patient calls. All of which presents a professional and friendly welcome to the caller.

And when people prefer to use the organization website to find information, our Web-based applications and VoIP technology ensure that this efficient and personalised response is replicated over the Internet.

Infotainment services such as in-room telephone, TV, Internet and vending machines enhance the patient's stay and improve speed of recovery, while personal communication solutions

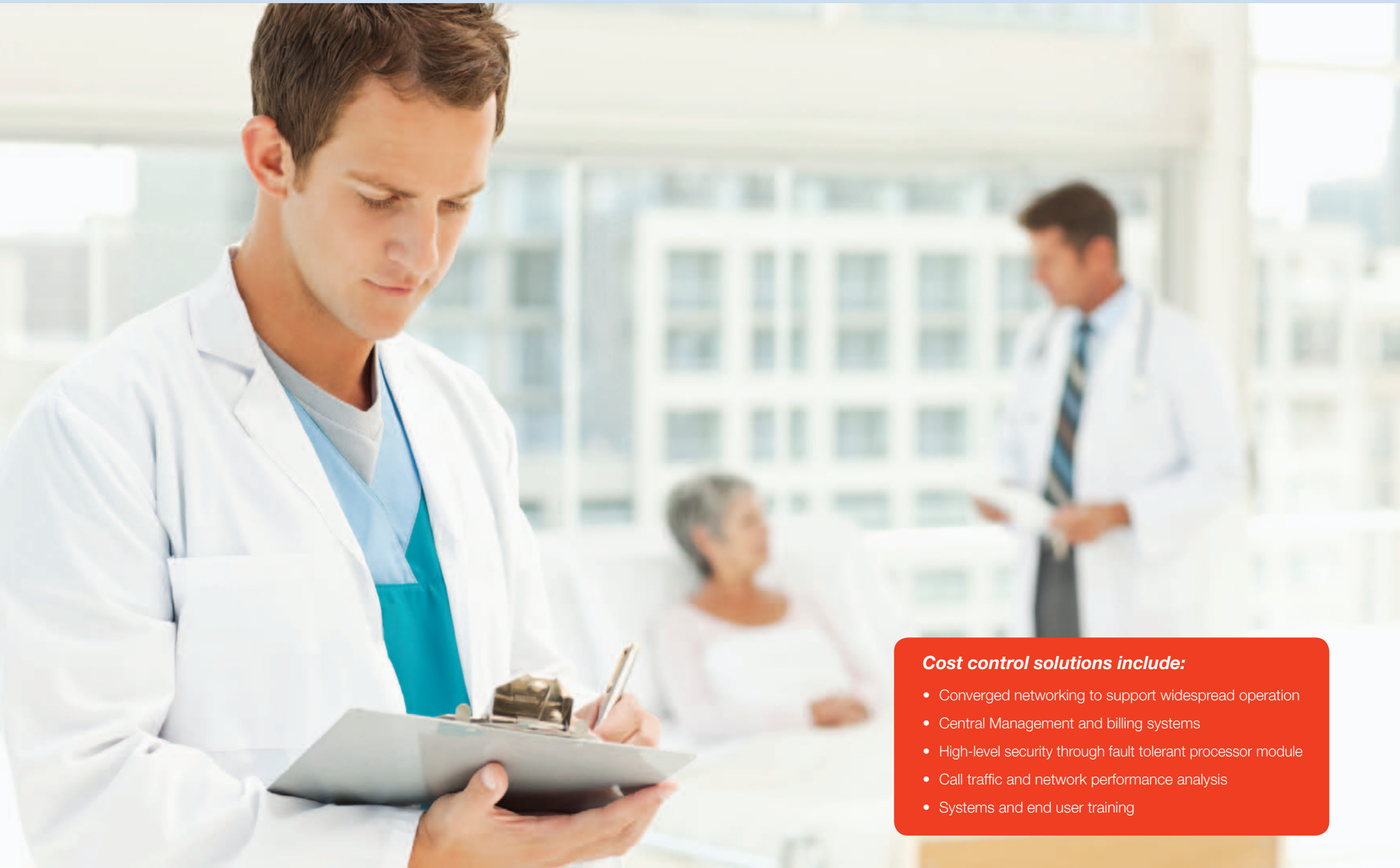
provide patients with their own telephone number, minimising calls to central reception staff. Also, because these telephone numbers are portable (i.e. the number remains allocated to the patient not to a device) friends and relatives of the patient only ever need one number to call throughout the patient's stay, no matter which department they are moved to.

The implementation of one-number per patient as well as patient infotainment management solutions streamlines billing administration. The automated transfer of patient information between different systems reduces workload on administrative staff and simplifies billing also for the patient.



Patient experience solutions include:

- Centralised operator services, call handling and management solutions
- Contact centre, front desk and web applications for streamlined multi-media communications
- Patient infotainment services-, telephony an patient billing



Cost control solutions include:

- Converged networking to support widespread operation
- Central Management and billing systems
- High-level security through fault tolerant processor module
- Call traffic and network performance analysis
- Systems and end user training

“Healthcare institutions also have to be commercial, competitive organisations”

Controlling costs and optimising investments

First and foremost, healthcare institutions are dedicated to providing the highest standard of medical care, but they also have to be commercial, competitive organisations able to attract revenue-generating patients. This is even more of a challenge for institutions that have merged to take advantage of economies of scale and share resources. The big question is: How can they ensure that they carefully manage their enlarged operations so that they function cost-effectively and do not put additional strain on resources?

The solution is to leverage new communication technologies that optimise the use of existing systems - to protect

investment and minimise operating costs. Advanced VoIP technology empowers applications that reduce costs yet maintain and enhance patient care. In addition, creating a single voice and data platform streamlines maintenance and management.

Distributed management solutions facilitate essential monitoring and maintenance, detecting and resolving problems swiftly and maximising network performance and system availability. Centralised management of communications also gives full control over call costs and billing reconciliation, particularly important for tracking

and invoicing infotainment services without draining administrative resources. Sophisticated billing solutions also enable institutions to reduce costs by analysing call traffic to identify further efficiency improvements.

In addition, innovative e-care solutions can improve the quality of medical care and support related processes, while telemedicine can reduce the number of doctor visits and hospital stays. All of which help to reduce costs and improve quality of care.

“Addressing today’s pressing issues”

Hospitals

Today, many hospitals still work with paging systems to notify staff, however these can no longer cope with today’s requirements for real-time feedback, high quality voice calls and information prioritisation. Present day requirements call for an integrated messaging solution supporting alarm notification, emergency calls, localization and mobilization, thus enhancing staff and patient safety and service levels.

The answer is a mobile device as part of the Unified Communications system. When staff carry a device such as the M155 Messenger, they can be reached regardless of where they are in the hospital. The device is worn like a wristwatch, allowing clinicians to make and receive calls while carrying out other tasks. And it can be used to receive (and make) both voice calls and text-based messages, and messages can be sent to groups as well as individuals.

Clinics and elderly homes

Some patients need constant care so that they don’t inadvertently come to any harm. Likewise, some isolated staff members find themselves at risk in A&E departments or secure psychiatric units. NEC’s portfolio of communication systems can help to minimise these risks, without restricting mobility.

For healthcare professionals, devices can be provided which automatically - or manually - send out an alarm, generally or to a specific recipient, when necessary. This means, when required, help can be brought in quickly whenever a healthcare professional needs it. Even though they are highly mobile, they are never alone.

Even if they don’t send out an alarm, it is possible to pinpoint their location anywhere within the wireless network, through their personal communication device. In home for the elderly, patients can be issued with a hands-free medallion device that they can use to raise an alarm if they need help, by pressing one button. Using location tracking information derived from the in-house cellular wireless network, their carers can monitor their movements through the day and night and restrict it if need be. Staff will know if patients are out of their beds and at what time. Patients can be granted access to certain areas at certain times of the day or night through the location-sensing technology around them.

Doctors' practices and at home

Doctors' practices require a telephone system that can cope with high volumes of calls at busy times. It is important that all callers are answered and receive a high level of personalised service.

When handling telephone appointments, the doctor will be provided with an alert when there is a new call waiting, together with information about the patient in a screen pop. A complete record of all calls is made, and archived away for whenever they are needed.

In addition telemedicine helps make life simpler and safer for chronically sick patients in their own homes. Help and assistance can be called automatically thanks to modern ICT solutions. This reduces the number and duration of hospital stays and visits to the doctor.



Ten powerful reasons to rely on NEC

Innovation

As a leading global ICT solution provider, we are known and respected for driving innovation

Experience

We have 100+ years of experience in IT and networking

Evolutionary

We help to protect our customers' existing investments, thanks to our evolutionary approach towards new technologies

People

Our user-centric approach enables us to place people at the centre of communications

Green

Our environment-friendly products and solutions that are low in energy consumption

Mobility

We have an unprecedented track Leadership in mobile technology and solutions

Open

Commitment to stimulate and adhere to open standards, ensuring optimal flexibility

Reliability

We are a stable partner whose mission is to realize an information society friendly to people & the earth

Support

Unsurpassed technical support

Local

Global vision & expertise combined with local presence.

“NEC places people - not devices - at the center of communications”

Solutions summary

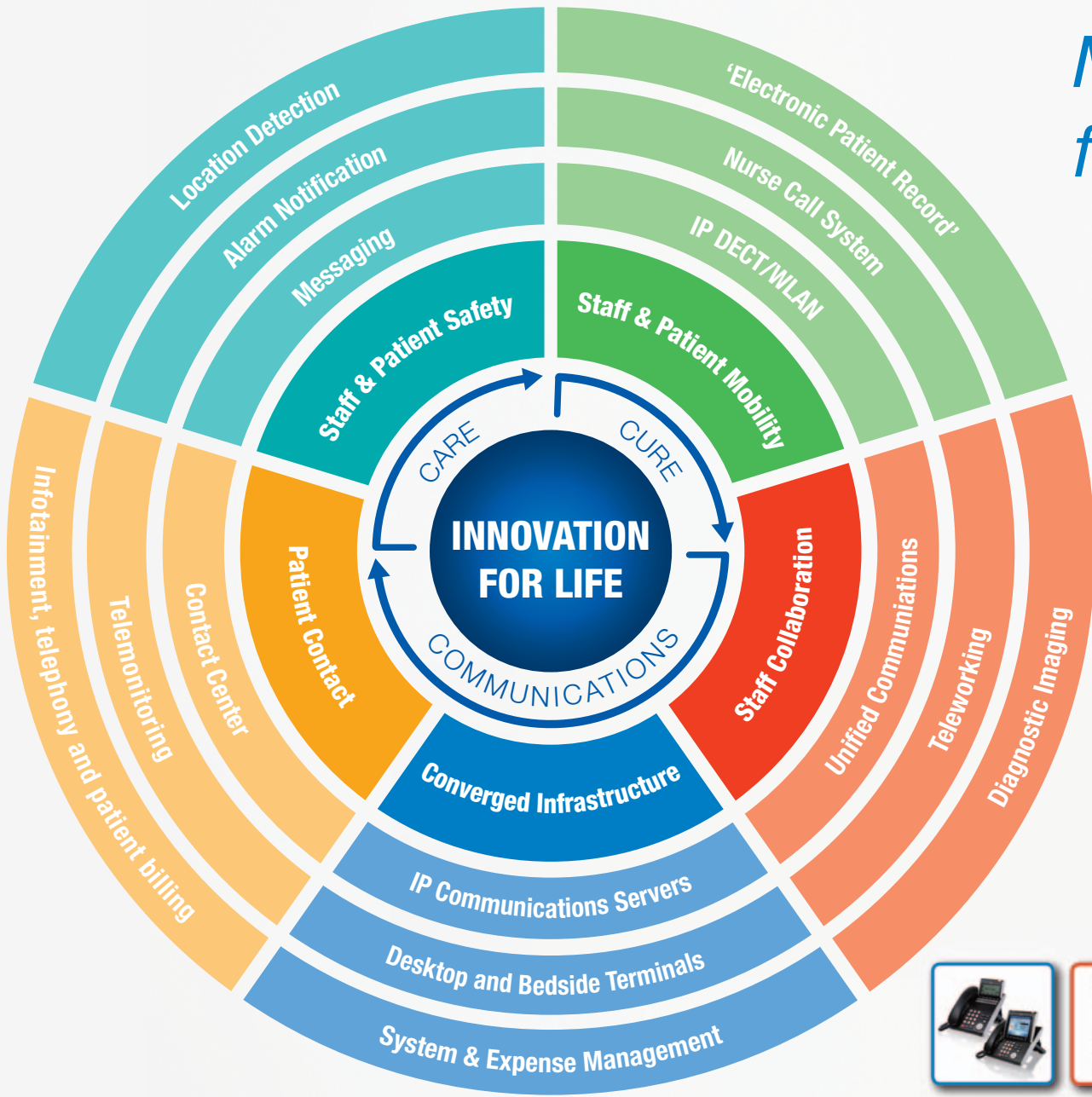
Our portfolio of products and applications provides complete solutions for a wide range of healthcare needs. It interoperates with existing medical technologies to enhance the return on previous investments and improve the effectiveness of any healthcare organisation. Our products and solutions are known for their reliability, ensuring continuity when you need it most.

A vision on partnership

NEC has a clear vision on healthcare, and we are committed to realizing that vision year-on-year. That's why we - besides our investments in our own R&D developing innovative technologies and solutions - we invest substantial resources in building and maintaining partnerships with technology-leading suppliers and thoughtleading healthcare associations.

We actively seek out strong partners with in-depth knowledge and experience in healthcare solutions and engage with leaders such as: Ekahau, New Voice, iXarna, Telezorg, Philips CareServant. Together we create winning teams, always with the aim of strengthening core offerings and delivering total solutions and better serving our customers in the healthcare sector.

NEC's Communications for Care and Cure



For further information please contact your local NEC representative or:

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About NEC Corporation: NEC Corporation (NASDAQ: NIPNY) is one of the world's leading providers of Internet, broadband network and enterprise business solutions dedicated to meeting the specialized needs of its diverse and global base of customers. NEC delivers tailored solutions in the key fields of computer, networking and electron devices, by integrating its technical strengths in IT and Networks, and by providing advanced semiconductor solutions through NEC Electronics Corporation. The NEC Group employs more than 150,000 people worldwide. For additional information, please visit the NEC home page at: <http://www.nec-unified.com>

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