



MANIFESTO FOR AN eHEALTHIER EUROPE

Better Health is everybody's business.
We need policy makers to:

- **Accelerate the adoption of technologies** that have proven value and benefits in order to reach scale.
- **Re-invest savings in research, innovation**, reduction of public debt, and local growth and employment.
- Don't simply cut costs, but **focus on policies for sustainable health**.

DIAGNOSING THE ISSUES

IN DIFFICULT ECONOMIC TIMES MINDS ARE EASILY DISTRACTED ON SHORT-TERM FIXES.

Cutting costs today often means postponing those fundamental investments and opportunities to reduce debt, secure better care, provide broader access and faster delivery in the medium- and longer-term. Collectively, we must dare to provide better care through innovation and efficiencies with real impact given the amount of money available in the system.

Here is why we don't have a choice but innovate to address the lack of sustainability in the system:

HEALTH EXPENDITURE

Health expenditure averages around 9% of national GDP in Europe; in the US it is approaching 16%. The proportion of Europeans aged 65 years and over will grow from 16% in 2000 to 24% in 2030.

CHRONIC DISEASES

Chronic diseases cost around 75% of healthcare budgets and account for 85% of premature deaths in Europe.

ELECTRONIC TRANSFER

Over 5 million outpatient prescription errors could be avoided yearly through the use of electronic transfer of prescriptions.

LONG-TERM NURSING

Long-term nursing care accounts for less than 10 % of expenditure in the majority of the Member States, but reached 22% in Denmark.

EXPENDITURE ON HEALTHCARE

Expenditure on healthcare ranges from PPS 403 per inhabitant in Romania to more than PPS 2 700 per inhabitant in Germany, France, Belgium, the Netherlands, Austria, Denmark and Sweden.

ICT SKILLS

There is a serious gap in ICT skills amongst health professionals. Left unaddressed, this will slow down the realisation of the benefits innovation can bring in the next five years.

DIGITAL IMAGE PATHOLOGY

The average image size processed in Digital Image Pathology is 32,500 x 59,000 pixels or 300 MB. A head and neck scan generates one Terabyte. Cloud computing can help store images and save precious costs and time.

LOW HEALTH LITERACY

In the US, it has been estimated that low health literacy costs the American economy up to \$ 73 billion per year.

E-MESSAGES

In Denmark alone, 2,5 million e-messages are exchanged monthly including 84% patients referrals from hospitals to general practitioners, 97% lab analysis and 66% reimbursement.

POOR COMMUNICATION

Poor communication is the causal factor in over 60% of medical errors.



INVESTING IN eHEALTH FOR REAL IMPACT

Reducing eHealth investments today is not the solution.

We need focus on key elements that enhance the impact and sustainability of technology projects.

We have identified 7 key principles that help deliver real impact and better health:

People are more important than systems.

We will not reap the longer term systemic benefits of ICT in health if individuals do not feel a personal gain at the moment of use.

eHealth available to all not some.

Technology is an important tool for helping to address the core challenges of any health system. Access to enterprise-class technology should not be limited to enterprise-class ICT budgets.

There's more to health than hospitals.

Connecting the constituent parts of the health ecosystem helps to ameliorate the core issues at systemic level. The continuum of "cure and care" not just the "cure" issues must be central to the plan.

Electronic Medical Records (EMRs) and Electronic Health Records (EHRs) will not solve all your issues.

Digitizing and automating core clinical and operational data and processes is an important start. However, the real value happens when care delivery becomes knowledge driven, not just data driven.

Health ICT must scale care not just mimic it.

Merely digitizing the existing processes of today will not create the efficiencies desired where care is abundant, nor will it solve the access issues where skilled labour is scarce.

Interoperability is vital as no one can do this alone.

The battle lines are being drawn between those who are working collaboratively with modern, open standards architectures and those who are held back by legacy and closed systems. The Connected Health Framework promotes a vision of openness, interoperability and collaboration using a free, open and extensible reference architecture.

Organizations need to plan for the long term.

The pace of change is quickening in eHealth globally and we must learn what constitutes "too slow" as well as "too fast. The flow of investments into innovative companies, products and solutions needs to align to the same cycles. The definition of successful eHealth projects need needs to include the opportunity costs we avoid as a result of what we invest today.



PRIORITIZING BREAKTHROUGH SOLUTIONS FOR REAL IMPACT

MANY OF THE SOLUTIONS THAT WE NEED ARE
ALREADY WITH US.

IT IS PART OF OUR OPPORTUNITY TO PRIORITIZE
AND INVEST IN THE FOLLOWING SIX
TRANSFORMATIVE BREAKTHROUGH SOLUTIONS.



1. CLOUD COMPUTING

The use of ICT in health is increasing dramatically; this means that keeping in-house systems up to date is both expensive and time consuming. Cloud Computing can lower overall costs, increase access, provide scalability and elasticity to the demand for health services.

Optimizing servers' utilization up to 60-70% lowers the associated economic and energy costs saving up to 35% of ICT budgets

The Swedish Red Cross was able to save 20% of their IT operating costs when embracing the cloud and at the same time increase collaboration and communications reliability, while freeing up to 25% of people's time to focus on more strategic tasks, better supporting the core mission of the organization

In Italy, the paediatric Hospital Bambino Gesù serves more than one million patients a year. Email and collaboration software hosted in a third-party Data Centre and delivered as a service over the Internet has enabled the hospital to retire its on-premise hardware, reduce ICT staff workload, and save around 60 per cent of costs and about 100 hours a month in maintenance.



2. BETTER COLLABORATION THROUGH UNIFIED COMMUNICATION

Remote, easily accessible and low-cost interactivity between care givers, including shared screen, presence, messaging, document and desktop sharing, conference calls and video, can make remote care, case and condition management a reality even at a distance. It makes it easy for patients to have resources at their fingertips 24/7 and to take responsibility for their own care. Healthcare workers may spend many hours and resources traveling from site to site to see patients or travelling for case management, then having to update information in their files.

Through collaboration tools like Lync and SKYPE, as well as and in conjunction with partners' solutions like Polycom Telemedicine Kart, healthcare professionals can visit their patients and sit in on continuing medical education from their desk, thus reaching more people and helping to save lives with less resources.

In the UK, the West Lothian Council is saving 3 million pounds a year by implementing technology that allows different agencies to work together more effectively thereby enabling a holistic patient's view. The time gained in case discussions versus facts finding and information gathering has been doubled.

In Poland, Enel-Med is one of largest private medical care organization nurses were able to use shared calendars, online booking of appointments for patients and doctors, reserve rooms and beds for patients, and check the availability of medical equipment.



3. RELATIONSHIP AND CASE MANAGEMENT

The ability to provide end to end case management, rapid access to information for patients as well as members of the medical team and the extended circle of care stakeholders, is empowering citizens and patients to take active and more expert responsibility for their health.

EVIDENCE SHOWS HOW THIS IS KEY TO CURBING COSTS, ENHANCING ADHERENCE AND IMPROVING OUTCOMES.

The **Socialist Mutualities in Belgium** implemented a Case Management project using Microsoft CRM to provide members with access to their personal health records, streamline internal administration processes by using a portal, improving complaint management, publishing vital information and managing the lifecycle of care and cure. The system is adopted by 4000 users covering 2,9m members. It provides a reduction in the range of 12-15% of the previous administrative cost.

The implementation of **Patient Relationship Management for children with type 1 diabetes** at the **University College London**, brought a measurable results : 20% Reduction in administration time, 68 new referrals to service in 2010 with no change in staff numbers. PRM enables the engagement of all care stakeholders around the active and expert patients. In this case 100% of patient children's' schools put Medical Management Plans in place and as a result 70% of school children had 0.3% reduction in HbA1c following school study days.

At **Guy's and St Thomas' Hospital**, PRM resulted in the reduction in referral time from 13 to 3 minutes, a reduction in development time \ cost of 60% and a predicted annual saving of £480.000, with only 16 weeks to develop the solution.

When **TicSalut in Cataluña** implemented Microsoft CRM together with Avanade, it helped create a new culture of shared knowledge, transparency and effective communication with immediate economic benefits.

The 26 regional agencies of the French Ministry of Health use a Business Intelligence platform to consolidate administrative and financial reporting based on Microsoft SQL Server and Microsoft SharePoint Server.



4. BUSINESS INTELLIGENCE AND DATA VISUALISATION

Health organizations need accurate, timely information to address escalating costs, ever-changing regulations, increased patients' and citizens' mobility and escalating demand for medical services in an ageing population.

Digitising patient information generates valuable knowledge, offering the baseline to generate efficiencies, providing better insights to support more informed decision making processes.

INTUITIVE, INTERACTIVE DASHBOARDS, DELIVERING RELEVANT VIEWS OF INFORMATION AT THE RIGHT LEVEL OF DETAIL MAKE IT EASY FOR PEOPLE TO WORK MORE PRODUCTIVELY

In Germany, **EYE ON HEALTH** uses Microsoft SQL Azure database to store and manage large amounts of data from 400 hospitals across the country. It brings together an updated and growing pool of demographic and clinical data, lists of physicians, and infrastructure availability data to help patients locate clinics and examine service portfolios. Payers can analyze market environments and plan future services. Thanks to the easy visualization techniques in Bing maps, health providers can identify efficiencies and opportunities for better services.

Built on the Microsoft .NET platform, the **e-Health National Portal in Denmark** supports 92% of all General Practitioners with online access for all 78 hospitals and 330 independent laboratories. Citizens can access information about all hospitals via the internet and receive 81% of prescriptions electronically (around 1 million per month).

An EU award-winning solution on **seamless digital communication developed at Ingolstadt Clinic**, using Microsoft Infopath-based digital forms enable doctors and nursing staff to capture data directly at the bedside, reducing administration and data input time and making information available at any time to all departments.

In France, **HCL, the hospital group of Lyon** has developed a portal named MyHCL to facilitate relationship between hospital, independent doctors and patients. The Microsoft Lync platform supports tele-expertise and telemedicine.

5. NATURAL USER INTERFACES

Newer, more intuitive and more natural user interfaces that learn from, and adapt to, users make health support closer to homes much simpler. This allows older patients to remain more independent, providing low cost remote expert consultations through distant, but personalized interaction, at times via an avatar.

Microsoft has invested over \$10m on developing safe, compelling and free user interface tools for health workers.

In **Poland and Croatia**, natural user interface technology is being adapted to help remove mental and physical barriers to technology, to support an interactive form of motion rehabilitation with special set of exercises based on the use of Microsoft Kinect games for children in oncology centers as well as rehabilitation centers entertaining them during the long periods of isolation due to their illness.

Through Kinect, gaming becomes part of health and lifestyle management. Games can be designed around specific goals, such as stretching, movement, range-of-motion, and increased visual skills.

6. MOBILE HEALTH (M-HEALTH)

Mobile devices are becoming instrumental in providing greater access to cure and care. They deliver health literacy for larger segments of the population in remote areas and emerging countries, as well as improving the capacity of health systems in these countries to provide better health. mHealth applications improve the ability to diagnose and track diseases in real time and include the use of mobile devices in collecting community and clinical health data, delivery of healthcare information to practitioners, researchers, and patients, real-time monitoring of patient vital signs, and direct provision of care (via mobile telemedicine).

Nazounki Global Medical Network connects Western doctors to patients in Africa using software application and mobile phones to remotely exchange information and medical services <http://www.nazounki.org/>

Wilson To and colleagues at UC Davis in California developed two award winning mHealth applications for **Windows 7 Phones**. Using a specially modified mobile phone camera and software, the application detects and analyses blood vessel tortuosity in the retina as an indicator for sickle cell anaemia or other blood and vascular diseases in children and adults. In 2011, the same team developed LifeLens, an application using an adaptation of the mobile phone camera and application software to examine blood smears and detect the parasitic organisms that cause malaria.

Dr. Neil Martin and colleagues at UCLA developed special imaging software for mobile devices in the emergency room, to be used by doctors to transmit high resolution images to the mobile phones of on call neurologists. The consulting neurologist is able to confirm the diagnosis of a stroke and determine if it is thrombotic or haemorrhagic. With rapid confirmation of a thrombotic stroke, emergency rooms doctors can initiate life-saving thrombolytic therapy that also substantially reduces the risk of a disability secondary to stroke.

Microsoft partner, IQMax, <http://www.iqmax.com> develops applications for mobile devices that connect clinicians to patient data – from hospitals, clinics and other sources, and delivers it to their smartphone. This provides anytime, anywhere access to clinical information, thus speeding clinical workflow and improving the quality of care.

SUSTAINING INVESTMENTS AND PRIORITIZING BREAKTHROUGH SOLUTIONS WILL GENERATE REAL IMPACT FOR BETTER HEALTH.

FUELLING A HEALTHY LOCAL ECONOMY, NOW.

The technology needed to address the core challenges of any health system is already available today.

It is often perceived as expensive, not inclusive, and slow in delivering real return on investment. At times it is portrayed as shifting resources away from local jobs and competitiveness. What if the contrary was true?

The ecosystem of 6,000 local and regional technology partners and health innovators developing services and solutions on the Microsoft platform across Europe generates an industry worth 37 billion Euro.

It is an engine of direct employment for millions of people in high-value jobs. It is driving growth at the level of 11% Year-on-Year, equaling investments in local jobs, competitiveness and regional cohesion.

We need to make dwindling healthcare budgets go further, by creating efficiencies and optimizing current investments in ICT operations. And it is possible by putting in place eHealth policies for Real Impact.

DOING MORE WITH LESS: POLICIES FOR REAL IMPACT

The challenges to a healthier Europe are real and imminent. We need action today. Independently of the vendor of choice, policymakers need to prioritize investments in sustainable solutions, and take the necessary steps to ensure we are ready to face this challenge doing more with less

1. Prioritizing eHealth investments:

- **Invest more in prevention and continuity of care, with clear benchmarks and targets' setting.** Technologies supporting home and self-care and Patient Relationship Management should be prioritized in national and regional eHealth plans.

- **Prioritize those technologies that give Citizens and Patients a stronger voice.** Patients and citizens are increasingly active players of the care process, with higher levels of self-care, lifestyle management and home care. The European Innovation Partnership on Healthy and Active Ageing should promote patient and citizen centric breakthrough technologies.

2. Innovating the policy framework:

- **eHealth policies and plans must become 'Cloud ready'.** eHealth data needs to flow in the digital single market. National eHealth plans need to integrate Cloud Computing at the policy design phase to realize the benefits of scale, flexibility, lower costs and broader access.

- **Data Protection regimes need to be harmonised.**

Data protection is the foundation for eHealth solutions and services. We need a harmonized regime across the single

market for technology to meet evolving societal demands, users' expectations and innovation requirements.

- **Free the data.** Policymakers have the opportunity to support the movement of data from legacy systems to cloud-based services so that information and knowledge is seamlessly available anytime, anywhere for patients, caregivers and stakeholders in a private, affordable and secure environment.

- **Security helps adoption.** Providing support for standard based solutions will ensure that citizens, patients and customers can be confident that data is secure, speeding the adoption and impact of eHealth solutions.

3. Fuelling the local economy:

- **Industrial policies for innovative small and medium enterprises (SMEs).** Industrial policies and EU structural and regional funds need to be better geared to the needs of SMEs innovating in eHealth, with faster 'go-to market' support, internationalization, industrialization and funds for deployment of innovative solutions and services at a wider scale. A global approach to eHealth innovation will bring real benefits to both citizens and the economy in Europe as well as across the Atlantic.

- **Up-skill health professionals to be proficient in ICT.** In accordance with the goals of the EU US eHealth MoU, health professionals need upskilling to operating telemedicine, remote care and cure and running health analytics for improved decision making. Investing in workforce development and eHealth literacy will accelerate the uptake of eHealth projects.

- **Promote technologies that are interoperable from the outset.** The uptake of innovation relies on having the correct approach to open standards and interoperability at global level. The sustainability of health systems relies on the same principles. We need public policies which are aligned to this vision.

Microsoft and partners continue to invest in sustainable health solutions, better service delivery, local economic growth, and broader access to care for the citizens of today and tomorrow. We fully support the ambitions of Europe 2020 Strategy.

In dire economic times eHealth enables innovation towards a smarter, more sustainable and healthier Europe. It is everybody's business and it is in our collective interest to support an e-healthier Europe.

The **Asklepios group in Germany** has saved 36.5% of its ICT budget thanks to infrastructure optimization.

In the Alicante province of Spain, the **Torre Vieja hospital** is saving €327 per patient per year, a huge gain when dealing with an average of 660.000 patients per year.

In France, **public hospitals** have saved from 20% to 80% of their IT investment through a specific **Health Framework Agreement** contracted with Microsoft.

In addition to the provision of service support, the value proposition is focused on working groups involving **small, medium and large facilities** to define a set of common ways to address **health priorities**.

"Customers and partners around the world are already prioritizing solutions that will deliver deepest and fastest impact in health. There is a role for Microsoft to lead and contribute philanthropy of knowledge to help customers focus their investments in a way that drives greatest measurable returns in a sustainable way for the greatest number of people."

Neil Jordan
World Wide General Manager Health Industry,
Microsoft.

"Enabling Technologies play a critical role in helping governments across Europe provide better health for every citizen at lower cost. To succeed in delivering sustainable care and cure, we must invest in ICT today to secure a healthier Europe tomorrow."

John Vassallo
Vice President, EU Affairs, Microsoft.

"I firmly believe that smart investment in health – coupled with smart innovation in health – provide the keys to the more efficient healthcare systems of the future." (MedTech Forum, October 2011)"

John Dalli
Commissioner, Health and Consumer Policy, DG SANCO, European Commission.

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