KONICA MINOLTA

YOU

YOU WANT TO DEDICATE
MORE OF YOUR TIME TO
PROVIDING CARE.

WE

WE GIVE YOU SOLUTIONS
TO AUTOMATE YOUR TASKS.

DIGITISING
HEALTHCARE WORKFLOWS

Giving Shape to Ideas

THE SIMPLE STEP TO
REAL-TIME PATIENT INFORMATION

Today's healthcare market is heavily influenced by trends such as demanding patients expecting highly individual care in combination with freedom of choice. On the other hand, healthcare organisations are facing budget constraints and increased pressure to keep costs in check. At the same time, healthcare insurers are exerting more and more influence on how care is to be provided, and are structuring their IT systems to manage costs.

Cutting through the complexities of IT processes should be the first measure to tackle the challenges the healthcare sector faces. In order to make medical information more accessible and compliant, it is necessary to streamline data processes and reduce administrative expenses. Konica Minolta can support you in automating and optimising your document-related processes, helping you to simplify your information flow. This will leave you with more time and funds to focus on your core activity: providing care.

How you benefit

As a globally operating company specialising in office imaging equipment, document management systems and IT services, we offer healthcare institutions multiple benefits to manage electronic health records (EHR) and hospital information systems (HIS). These provide clear advantages:

– Greater efficiency, less human interaction and cost savings through digitisation of patient records and elimination of paper documents
– More up-to-date and relevant patient data through faster access to and exchange of information between medical personnel
– Less risk of human error and security breaches
– Faster storing, sharing and retrieval of patient records
– High-quality yet low-cost printing of medical images on paper

How you can cut costs

The savings in a healthcare environment mainly come from automating time-consuming and labour-intensive paper-driven processes:

– Reduced transcription costs
– Lower chart-pull, storage and re-filing costs
– Improved and more accurate reimbursement coding
– Lower risk of medical errors through better access to patient data and error prevention alerts
– Higher quality healthcare through better disease management and patient education

◢ Konica Minolta – a competent and trusted healthcare partner

Our OCR technology and smart document management solutions facilitate fast and effortless processing and archiving. Digital documents are easy to retrieve. User authentication technology at the output device ensures data security, auditable tracking and compliance with regulatory requirements. Our multifunctional devices convert paper documents into digital data – easily and reliably.

Konica Minolta Business Solutions Europe has over 20 years of experience in the healthcare sector. More than 5,000 healthcare facilities in Europe, the Middle East and Africa are already working with our digital document solutions; and we receive frequent recommendations from public interest groups and advisory boards in the healthcare sector.

Want to find out more about how we can help you?

ADMISSION & DISCHARGE:
AUTOMATING PAPER-INTENSIVE PROCESSES

Pain points in paper-based processes

In most hospitals the admission and discharge process is still relatively paper-intensive. Procedures are largely paper-based, for example recording the patient's personal details and processing information from a variety of external sources such as doctors, insurance companies and other hospital departments. Automating these processes brings numerous benefits.

Where problems can occur:

– Excessive paper usage
– Inadequate or out-of-date paper-based records
– Limited availability of records to personnel, with only one person able to work with them at any one time
– Spiralling print costs through wasted paper and lack of an internal print policy
– Security concerns through non-authorised access to patient records
– Patient identification errors due to missing wristbands or wristbands with incorrect information

Making sure you treat the right patient

Preventing patient identification errors is an essential part of medical best practice. Although such incidents are rare and usually detected in good time, wrong-patient events can result in mistreatment that might have serious consequences.

Fortunately, this risk can be reduced – with laser-printable wristbands: The simultaneous printing of patient wristband and chart labels on one sheet using Konica Minolta laser printers allows quicker printing of information and speeds up patient hospitalisation workflows.

Automating ambulance and emergency process

The most critical factor to providing emergency patient care is early diagnosis and accurate information – minutes can mean the difference between life and death.

Our solution offers the ability for direct transmission of patient information by an ambulance team while at the scene or in transit to a hospital. Ambulance & Emergency forms are sent directly to an ambulance team's tablet. Each form contains a unique reference to ensure it can be traced from the point of dispatch to arrival at the hospital.

The incoming data from the form can be formatted as an email, web page or PDF (ideal for archiving) to maximize readability and for rapid distribution to hospital staff. A database entry can be created for each ambulance and incident, detailing the dispatch time, GPS location and time submitted.
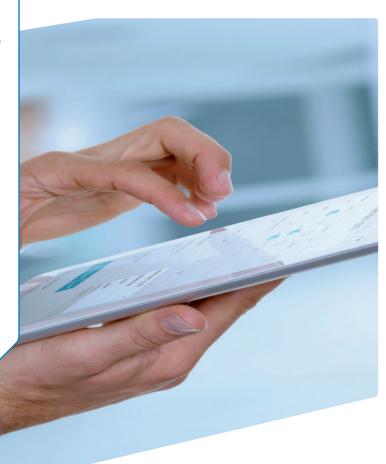
Once the hospital receives the data, medical staff prepares to receive the patient and provide timely treatment. Additionally, the database can be queried at any time to obtain reports on the efficiency of the entire process.
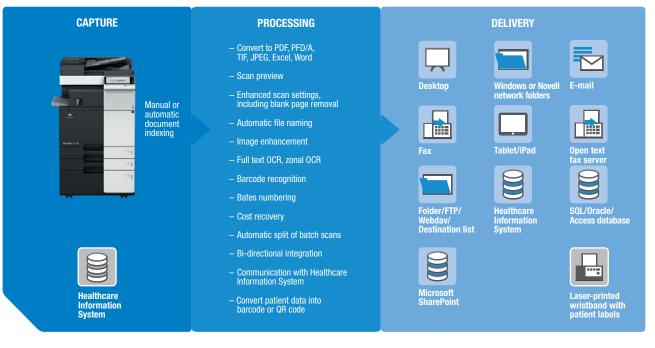
With our solution hospital staff is ready to provide immediate care – it could mean the difference between life and death.

The advantages of automated workflows

- Ambulance services: Supplying critical information to the hospital in real time so medical staff can prepare for a patient's arrival and save precious minutes of potentially life-saving time
- Fewer redundant or duplicated processes, for example patient admission information need only be entered once into the HIS
- Reduced risk of errors through automatic verification at each stage of a workflow
- Less administrative work through automated patient ID verification, compliance and eligibility processes
- Less time required to put together admission kits, for example through automated bar-coded face sheets, forms, referral consents, wristbands and labels
- Documentation automatically routed to relevant professionals, such as discharging nurse, attending physicians and external doctors
- Automated assembly of discharge kits
- Compliance with privacy regulations assured
- Improved resource management (e.g. beds, clinicians' time, etc.) through more efficiently organised discharge times

CAPTURE

Manual or automatic document indexing

Healthcare Information System

PROCESSING

- Convert to PDF, PFD/A, TIF, JPEG, Excel, Word
- Scan preview
- Enhanced scan settings, including blank page removal
- Automatic file naming
- Image enhancement
- Full text OCR, zonal OCR
- Barcode recognition
- Bates numbering
- Cost recovery
- Automatic split of batch scans
- Bi-directional integration
- Communication with Healthcare Information System
- Convert patient data into barcode or QR code

DELIVERY

Desktop

Windows or Novell network folders

E-mail

Fax

Tablet/iPad

Open text fax server

Folder/FTP/ Webdav/ Destination list

Healthcare Information System

SQL/Oracle/ Access database

Microsoft SharePoint

Laser-printed wristband with patient labels

Bringing paper documents into the digital world
An application connects Konica Minolta bizhub systems to healthcare software applications for instant capturing, distribution and management of paper-based information. You can scan documents securely and seamlessly simply by pressing a button.

ENHANCING EFFICIENCY
IN PATIENT PROCEDURES

One of the biggest obstacles to efficient workflows in a hospital is the proliferation of systems with which medical personnel have to work – with each system having different input requirements and different kinds of output. Any combination of paper-based and electronic documents has a detrimental effect on efficiency. Whatever patient procedures are involved, Konica Minolta has the technological expertise and healthcare experience to introduce automated workflows that bring substantial bottom-line benefits.

Blood tests – the benefits of automation

The traditional blood test workflow involves entering the patient's data and the physician's test request into a paper document, which is passed on to a lab assistant. The results of the blood test are then printed and a barcode label containing the patient information is added to that form, a copy of which in turn is added to the patient file. The results of the blood test are then distributed internally or transported by hand or car if the lab and the hospital are not in the same building. At a later stage, the data are entered into the HIS or EHR and the form may well be scanned for archiving purposes. All in all, a time-consuming, costly and error-prone process that cries out for automation.

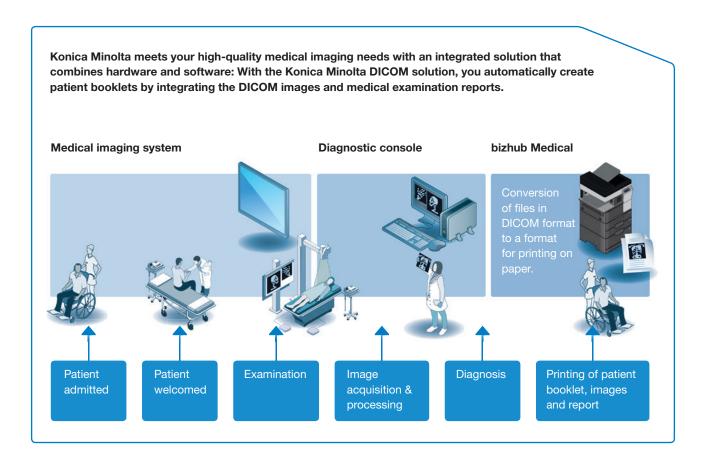Automation brings clear benefits in this exemplary blood test procedure:

– A single document containing the patient's data has pre-printed tick boxes for the physician and laboratory staff
– Test results can be sent electronically to the HIS
– The results are immediately available to authorised staff by e-mail or mobile phone
– The data is automatically added to the patient's file
– Privacy regulation compliance is assured since only authorised staff can access patient information

Radiology exams output on paper

Next to digital images and prints on film for a reliable diagnosis, patients can be provided with a printed booklet (PDB). The DICOM images from the RIS are combined with data from the HIS and EHR, and completed with an overview of the hospital, the specialist as well as scheduled appointments.

Advantages of the PDB solution:

– A booklet the patient can take home and share with the GP
– All information in one place (even in digital format: USB or DVD)
– A means for the hospital or medical centre to emphasise their strengths and commitment

Konica Minolta meets your high-quality medical imaging needs with an integrated solution that combines hardware and software: With the Konica Minolta DICOM solution, you automatically create patient booklets by integrating the DICOM images and medical examination reports.

Medical imaging system   **Diagnostic console**   **bizhub Medical**

Conversion of files in DICOM format to a format for printing on paper.

| Patient admitted | Patient welcomed | Examination | Image acquisition & processing | Diagnosis | Printing of patient booklet, images and report |

The advantages of follow-me printing

A doctor has just explained a course of treatment to a patient, who probably has not remembered all the details. No problem if a follow-me printing facility is available. The information the doctor has entered into his mobile device can be printed out on the nearest available printer via a Wi-Fi connection. A secure and straightforward solution that not only improves communication between doctors and their patients but also saves the hospital time and money.

Follow-me printing

E-prescriptions – a more efficient alternative

A physician prescribing medication to a patient – this is one of the most common hospital procedures, and one where automation can prove highly beneficial. The doctor checks the patient's digitised record to ensure there are no other medical issues or conflicting medication before preparing the prescription. The pharmacist receives the prescription by e-mail and verifies the credentials. If necessary stocks can be checked electronically and replenishment ordered. The medication is then delivered to the nurse and the details automatically saved to the patient's file. The benefits are clear:

– Enhanced efficiency
– Reduced risk of medication errors
– Speedier medication since prescriptions reach the pharmacy faster
– Relevant information immediately available to all caregivers
– Compliance with privacy regulations ensured

INVOICING & WORKFLOW AUTOMATION
IMPROVING BUSINESS PROCESSES

Invoicing and archiving are still paper and labour intensive processes in many hospitals and medical facilities. So much so that external service providers are frequently employed for invoicing, scanning and archiving purposes. At Konica Minolta we can help you implement a highly efficient document management system through automated workflows covering all the processes from document receipt and generation to archiving. Besides boosting efficiency and productivity, document management solutions are also cost-savers.

The business benefits of digitised solutions

– Medical staff no longer needs to spend extensive time on manual sorting, matching and filing of documents – all a potential source of errors.
– The easy addition of barcodes and OMR marks helps you automate mail preparation and combine multiple documents in a single envelope.
– You generate significant savings by doing away with preprinted paper and being able to print invoices, reminders, etc. on any output device.
– Digital archiving speeds the retrieval of any required information, helping you lower customer service costs.
– With intelligent content creation – for instance combining appointment letters automatically with relevant information like maps, forms, advice notes – you reduce manual work, waste prints, paper stock, and achieve faster updates.
– You gain the choice of document distribution: instantly print letters to hand to patients, or send the information by e-mail – which in turn enables you to reduce print volumes and postage charges.
– Via a predefined workflow, documents can be processed easily and automatically, triggering archiving, invoice printing for the health insurers, forwarding to branch offices, etc.

Make your paper form intelligent

Intelligent applications support you in defining and completely automating workflows for typical hospital procedures, merging paper-based and digital processes. Use the suitable software application to create the required forms, for example for hospital admittance or patient discharge. The admittance or discharge process can then be sped up considerably with the use of a digital pen to simply tick the appropriate boxes in order to enter all relevant patient information. As soon as the form is completed, patient details are automatically digitised and the data transmitted into the HIS. No further data capture or manual intervention is required.

The same application allows defining any type of required workflow, relating to the processing of patient files, determining treatments and other hospital procedures, etc. Extensive automation is facilitated and time as well as manpower saved, for example with the fully automated compilation of the appropriate invoice and simultaneous transmission of the relevant data into an archiving application.

INPUT

Host applications

– MIS
– ERP
– HIS

Office applications

– PDF
– DOCX
– XLSX
– PPTX
– TIFF
– JPEG

Digital pen

WORKFLOW

Capture

– Trigger the process
– Matching
– Indexing
– and/or scanning
– Filing

Distribute

– Sorting
– Folding
– Stapling
– Enveloping
– Mailing
– Emailing
– Archiving

Web

Communicate with external, e-commerce or web applications for live processing of online data

OUTPUT

Send

Follow-me printing

Secure printing

Archive

Print

DIAGNOSING NEEDS &
PROPOSING SOLUTIONS

Cost-sensitive healthcare providers are constantly looking for ways to save time and money. One way is through efficient management of printing and scanning workflows and infrastructure. Here, you can count on Konica Minolta to help. Our Optimized Print Services (OPS) program helps healthcare administrators evaluate the flow of documents, monitor scanning and printing, and measure and control costs more effectively. In order to reduce the amount of infrastructural administrative work, toner and service alerts can be automatically transmitted to Konica Minolta printers to trigger the support or delivery processes. In addition, this enables printers and multifunctional devices to work at peak performance with maximum uptime. Our software utilities help hospitals, clinics and insurance providers develop a roadmap to consolidate functions and replace under-utilised devices. And last but not least, we can help you reduce unnecessary copying and printing, cut down on waste and thus leverage the cost-saving power of digital records.

Three simple steps for more efficiency

– **Consult:** The path towards a more efficient organisation begins with the analysis of your existing processes and our subsequent optimisation proposal.

– **Implement:** Only after this evaluation do we implement your customised solution. Our certified project managers ensure that this solution entirely fulfils all requirements as agreed with you.

– **Manage:** For lasting success, we will continue to advise you on further optimisation measures in the long term. This way we ensure that you will always be perfectly equipped, even under changing parameters.

How your organisation will benefit

– Save money and achieve cost transparency with an optimised print fleet.
– Free your employees from tedious administrative tasks.
– Complete integration of your new solution into your IT environment.
– Protect confidential data by creating individual access rights with user authentication.
– Streamline print cost control and define default print settings like duplex printing.
– Reduce paper consumption and CO_2 footprint by avoiding unnecessary printouts.
– Minimise downtime with our remote diagnostic system.
– Take advantage of our continuous optimisation offer that responds to your company's future challenges.

Are you aware of your printing costs?

1 in 10 organisations know what they spend on printing

€ €€€€€€€€€€

FOR EVERY EURO SPENT ON PRINTING AS SUCH, ANOTHER NINE EUROS ARE SPENT ON BURDENED COSTS.
(ALL Associates Group 2012)

PRINTING COSTS (Hardware, toner, maintenance, paper, etc.)

BURDENED COSTS (IT support, administration, purchasing & storage of materials, documentrelated processes, etc.)

GOOD NEWS
You could save up to 30% of these costs.
(IDC 2009, Gartner 2013)

-30%

EVEN BETTER NEWS
Improving your workflows can help you save even more!

SAFETY FIRST – FOR YOUR
DATA AND THE ENVIRONMENT

A "safety first" attitude to data security and the environment is essential for any organisation. By entrusting your document capture, distribution and management processes to Konica Minolta, you are working with an industry leader in data security and environmental standards.

◢ Reassuring data security

By prioritising data security in all our document solutions, we deliver clear benefits to each and every organisation:

– **Secure network integration:** Our IEEE 802.1X SSL and IPsec protocol authentication methods allow easy integration into protected networks as well as secure network communication. Very all our multifunctional systems comply with the very strict security standards of ISO 15408 EAL3/EAL2.
– **Confidential documents protected:** We ensure that confidential data remain stay safe on a printer's hard disk or output tray through solutions such as data encryption, secure deletion, watermark copy protection and PDF signatures.
– **Access control and user rights:** Individual printer access rights can be defined for each user, with authentication via a magnetic card, PIN code or biometric fingerprint scan.
– **Secure printing:** Since authentication is required directly at the device prior to printing, our "secure print" feature prevents sensitive information from falling into the wrong hands.

◢ Proven environmental responsibility

To act upon our environmental responsibility Konica Minolta has adopted the Eco Vision 2050, a long-term goal that extends all the way to the year 2050. It focuses on combatting global warming, promoting resource recycling and preserving biodiversity.

Therefore, our products are designed to promote a recycling-oriented society, prevent pollution and minimise potential risks throughout the whole lifecycle. All this helps to reduce the environmental impact and as well supports our customers to take responsibility and live up to their environmental targets. Selected ecological product features:

– **Reduced power bill**: We are continuously striving to reduce the electrical power consumption of our devices. Some measures to achieve this target are toner that requires a reduced fixing temperature, a Dynamic Eco Timer (for defining an automatic on/off function) and induction heating technology, which enables rapid warm-up for fixing from a low standby temperature.
- **Improved Indoor Air Quality:** All devices as of production year 2018 have an integrated ultra-fine particle filter.
- **Less wasted paper:** Functions such as automatic suppression of white prints, duplex printing by default, follow-me printing and document print preview reduce misprints and paper wastage as well as unnecessary power consumption.
- **Commitment to recycling:** Our products and consumables are recycling-friendly. Furthermore, we use recycled plastics (PC/PET) in our devices, e.g. more than 80% in the outer casing material of bizhub C368/C308. Additionally Konica Minolta recycles milk containers and turns them into toner bottles.
- **Carbon Neutrality:** Customers can offset CO_2 emissions from printing by using our "Enabling Carbon Neutrality" programme. Additionally Konica Minolta offsets all CO_2 emissions arising during production and transportation without any extra costs.

Konica Minolta has been named industry leader in the group of "technology hardware and equipment" in the 2017 Dow Jones Sustainability Index (DJSI) and listed in the DJSI World for the sixth year in a row.

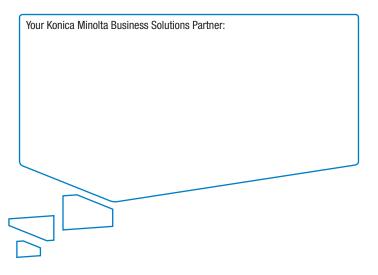**For more details of our environmental credentials see www.konicaminolta.eu/environment**

KONICA MINOLTA

Your Konica Minolta Business Solutions Partner:

07/2018