

The T-Systems Portfolio.

T-Systems serves your Health.

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# T-Systems serves your health.

# T-Systems

Your partner for information and telecommunications solutions.

As a subsidiary of Deutsche Telekom, T-Systems ensures more flexibility for its customers in more than 20 countries. Over 160,000 customers worldwide benefit from our unique ability to provide integrated information and telecommunications solutions from a single source.

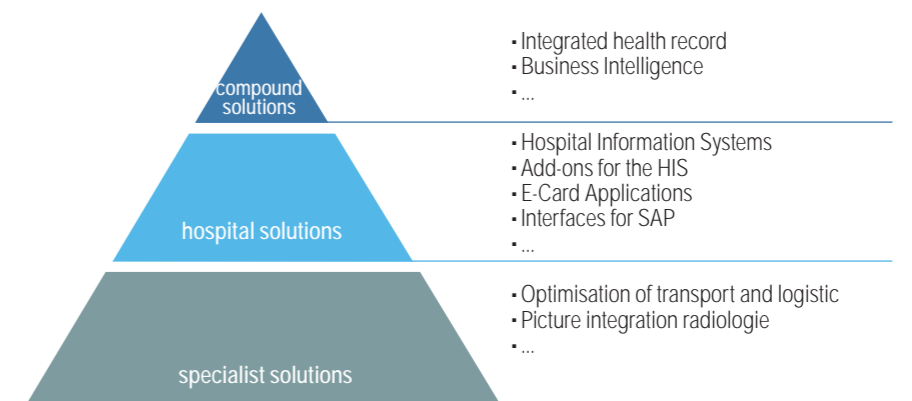
**T-Systems Austria** is one of the leading providers of information and communications technology in Austria. The focus is on five core markets – manufacturing, the public sector, healthcare, financial services and telecommunications.

T-Systems combines expertise in information technology (IT) with skills in telecommunications, supporting customers across their entire value chain and through all phases of the system life cycle – from infrastructure implementation, through solution development, deployment and integration, to ongoing operation. T-Systems Austria is T-Systems' international competence center for healthcare.

In 2006, T-Systems Austria realized a turnover of EUR 159 million. The group has approximately 800 employees in Austria.

T-Systems has a long history, of more than twenty years, of involvement in the healthcare sector. The international competence center for healthcare with its headquarters in Austria sees itself as an information and telecommunications provider and as a partner for its customers from project management, through implementation and integration services to operations and support.

Customers that use our specific solutions include both hospital trusts and responsible bodies as well as hospitals and individual specialist departments.



solution overview and project competence



# Our services.

## Everything from a single source.

### Project management und coaching.

The sure path for a successful project.

The complexity of healthcare projects is constantly increasing. For this reason, extensive knowledge of clinical processes is a major success factor in your project work. T-Systems has been service provider and system integrator in healthcare since 1985. Our experienced certified project managers see the big picture around healthcare. Over the last two decades, we have been able to successfully implement numerous national and international projects, beginning with the implementation of solutions in specialist areas, continuing with integrated hospital solutions up to health networking of a region.

Our healthcare know-how, solidly built on tested project management methods, is the best premise for successfully mastering even the most challenging projects.

Project management is the complete set of tasks, techniques and tools applied during a project (DIN 69901).



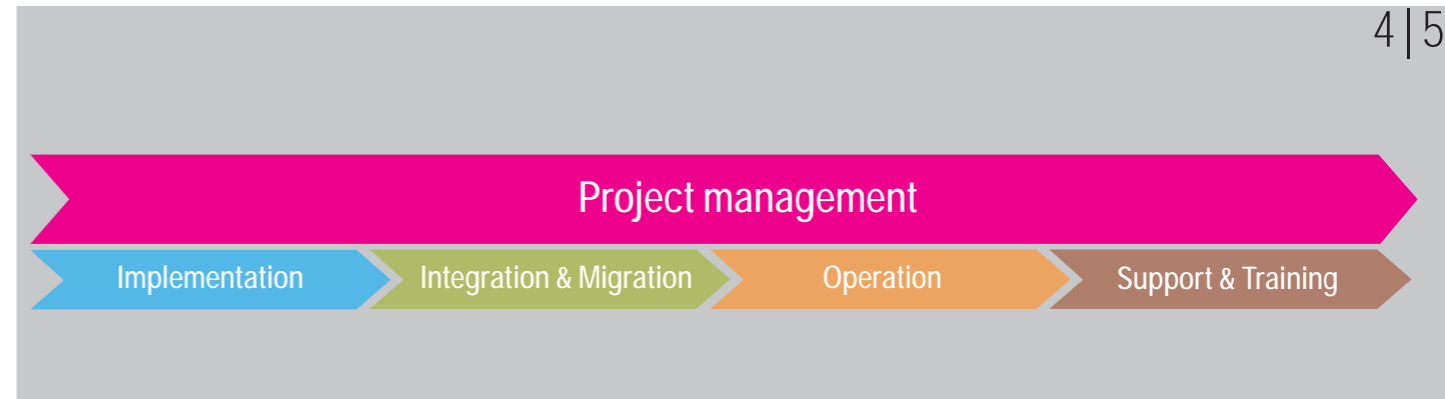
#### Rely on T-Systems.

Our services – your success:

- Project management
- Program management
- Coaching for project managers
- Change management
- Claim management
- Project controlling
- Project auditing
- Support in setting up projects and programs

### Implementation.

As an IT service provider, T-Systems has many years of experience in developing and implementing new solutions.

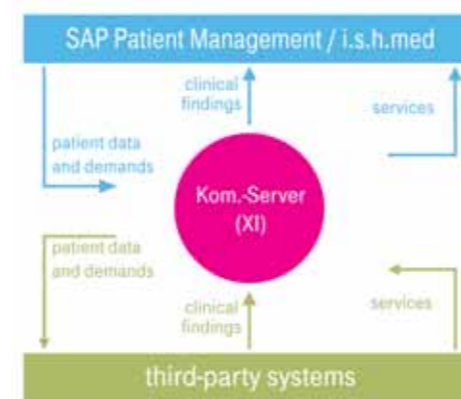


### Integration & migration.

Integrating third-party systems is a major element of the process when introducing a new piece of software, for example, a hospital information system (HIS) such as i.s.h.med. Specific functions and tasks such as image archiving, intensive data storage and laboratory apparatus connection must be migrated from the HIS. At the same time, the customer also explicitly requires that existing third-party systems be integrated with SAP Patient Management (IS-H)/i.s.h.med.

Usually the migration of existing patient-, case- and treatment data is also a requirement when introducing a new hospital information system. In this way, the hospital staff is able to continue work as usual in the new system environment.

T-Systems helps you successfully implement your integration and migration projects.



Achieving an integrated solution with T-Systems.

### Operation.

T-Systems can also operate solutions and applications on behalf of its customers. The data center at the T-Center is one of the most modern and secure in Europe. It features the highest technical security and disaster provision standards. Surveillance is provided 24/7 by over 400 cameras. The data center is completely autonomous and is not dependent on external sources of electricity if there is a crisis incident. Five independent data center cells are located 20 meters under ground. The complete supply structure is redundantly designed.

Around 100 companies from the Austrian industry as well as public institutions and businesses in the healthcare sector have already migrated their entire IT infrastructure to T-Systems. A further 1,000 customers use IT components or the network of T-Systems. All customers are thus networked with their international corporate locations via the Austrian data center. T-Systems can operate infrastructure, SAP applications and global networks in a flexible way and make them dynamically useable.

Sit back and relax – T-Systems operates for you.

### Support.

Our qualified team of experts can monitor systems operations upon request, carry out data corrections and is the first point of contact for your enquiries and requests. The same goes for support in production starts and data migration processes. Application support means testing, coordinating and planning installations and upgrades directly on the customer's system. Moreover, application operations serves as the first point of contact for faults and notification of problems.

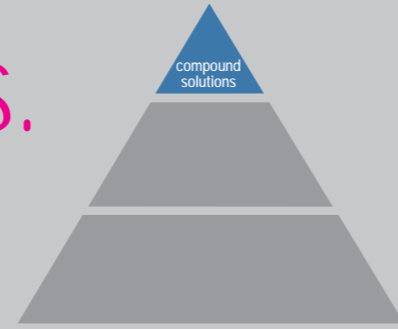
### Training sessions.

T-Systems offers training sessions for all of its supported information systems. These range from user training to business function SAP patient management workshops, and extend to i.s.h.med certifications. Our experts share their know-how about the most diverse clinical IT subject areas in specifically compiled training courses and education programs, combining both theoretical principles with hands-on training exercises.

We do the training, you get the benefit.

The right solutions for everyone.

# Compound solutions.



Hospital trusts and responsible bodies require solutions for electronic medical records and data transparency are increasingly necessary. We have targeted solutions for all of these requirements.

## Business Intelligence for Healthcare.

Lowering costs without reducing the quality of clinical services is an issue that continues to gain importance in the healthcare domain. In order to achieve this goal, relevant information from many different source systems must be made available quickly and efficiently for analysis in a business intelligence solution.

**T-Systems helps you in collecting and processing the necessary information.**

We provide you with a spectrum of services that range from the introduction of a company-wide business intelligence solution to the provision of software products aimed at the extraction of data from clinical systems.

“We don’t want to reinvent the wheel.” Being able to reuse already modeled data cubes and evaluations is one of the specific demands of our customers. Products and solutions based on our extensive experience in the healthcare sector specifically take this requirement into account.

### health | b.i.<sup>lkf</sup>

This solution targets particularly the Austrian Health market as due to the “performance-oriented financing of hospitals” (Leistungsorientierte Krankenanstaltenfinanzierung, LKF). Here, every treatment must be mapped to a catalogue entry (e.g. from the ICD-10 catalogue) which is again linked to a certain amount of scoring points. These points are submitted to the official authorities and are remunerated accordingly. By using a b.i. system, the scoring points can be reverse-tracked to the originating cost unit, which enables hospital analysts to visualize the costs and revenues per organizational unit.

### health | b.i.med<sup>pmd</sup>

Has your hospital accumulated a multitude of parametrized documents in i.s.h.med over the years? Do you want to be able to benefit from this valuable knowledge?

With health | b.i.med<sup>pmd</sup> your data is transferred to the b.i. system as basis for monitoring and quality assurance.

### health | b.i.med<sup>ext</sup>

health | b.i.med<sup>ext</sup> is an add-on to i.s.h.med that enables extraction of medical and administrative data.



„With T-Systems you are always connected.“

## Electronic health records.

**The networked solution.**

Comprehensive knowledge about the patient is the key to increasing the quality of care and reducing treatment costs.

The objective is to make information available to medical facilities in the healthcare domain independent of time and place and to the required degree.

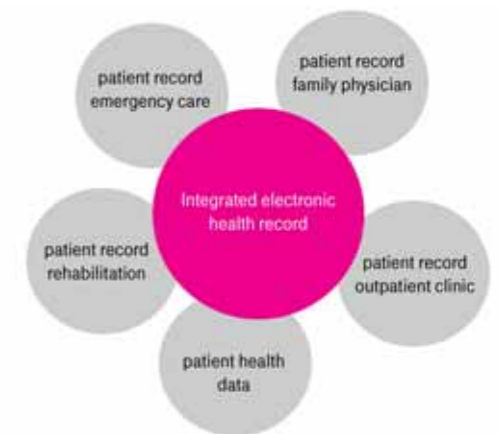
The electronic health record helps achieve this aim: it connects patient and treatment data from different facilities and provides the clinical user with a patient-centered view.

The crucial success factor in setting up an electronic patient record is the employment of interoperability standards. these standards ensure

that the investment made are not lost in the long term. IHE (Integrating the Healthcare Enterprise – [www.ihe.net](http://www.ihe.net)) sets standards by defining integration profiles and testing healthcare products for interoperability.

Tiani Spirit eHR offers, within the framework of a modular system, the function range of an electronic patient record, from connection to the participator systems, through integration of patient and health data to presentation for the user. All components in Tiani Spirit eHR are based on the integration profiles of the IHE and have the IHE integration statement.

T-Systems, as an information technology services provider, has many years of experience in developing, implementing and connecting healthcare systems which forms the knowledge basis needed to build electronic health records. The scope and content of electronic patient records, as well as the necessary requirements and measures with respect to data protection are designed according to the project requirements.



# The right solutions for everyone. Hospital solutions.



T-Systems has been operating in the healthcare system for over 20 years and has, together with corporate partners, developed special solutions for hospitals. With the well-established i.s.h.med hospital information system and solutions such as the E-Card check-in or interface solutions for SAP, we serve our customers as integrated solution provider for many years.

## Hospital information system.

### Flexible IT solutions in the hospital.

Excellent medical treatment must be provided throughout the hospital despite all pressure to reduce costs. Information technology is intended to help achieve this objective now and in the future.

The i.s.h.med clinical workplace system is flexible and contains the ideal mix of generic tools and specific features. Due to its specific modules, i.s.h.med can be employed in small hospitals run by private bodies as well as in university hospitals and central care clinics as well as compound hospitals with over 2,000 beds. i.s.h.med is fully integrated into SAP. All departments within the hospital are fully integrated into the HIS.

The system supports hospital users in their individual work processes. i.s.h.med offers a multitude of functionalities in one package. An integrated solution with i.s.h.med means taking optimal advantage of synergies and getting efficient support for medical processes.

### Convincing reasons for using i.s.h.med:

- Usable in all medical areas, including scenarios between multiple specialities
- Fully integrated into the SAP environment
- Specialized toolsets for specialist areas
- Tested in over 280 hospitals worldwide
- Transparent planning, complete documentation

## Supplementary additions to the hospital information system.

A piece of standard software must often be individually adapted to the internal processes in order to be used in the daily work routine. Some processes are structured in a similar way throughout different hospitals. For these processes, T-Systems offers templates and add-ons, which allow complex workflows to be implemented in an existing HIS with little effort on adaptation.

### An overview of some of our add-ons and templates

The T-Systems portfolio ranges from simple process integration and interfaces for different software providers up to individual documents such as the physician's letter, medical findings, case history and a lot more.

### Notation light in i.s.h.med

This toolset offers a simple way to incorporate Drawings into parametrized documentation. Symbols, lines or circles can be directly drawn in the document. Having completed the documentation work, the finished image is deposited into an archive and becomes a fully integrated part of the approved document.

### Connecting i.s.h.med appointments to external appointment systems

This connection sends i.s.h.med appointments to an external appointment system such as MS Outlook or Lotus Notes. In this way, physicians can link their own appointments to the i.s.h.med patient appointments, thus optimizing their time management.

### SpeaKING® – speech recognition as a way of connecting to i.s.h.med

The speech recognition connection to i.s.h.med provides the support of several workflows, thereby significantly reducing the workload for hospital staff.

### Problem focused documentation

Enables the physician to enter the medical documentation using terms of common language. The system supports this process by means of automatically generated suggestions for treatment. Furthermore, Problem focused documentation produced in this way is directly booked in i.s.h.med.

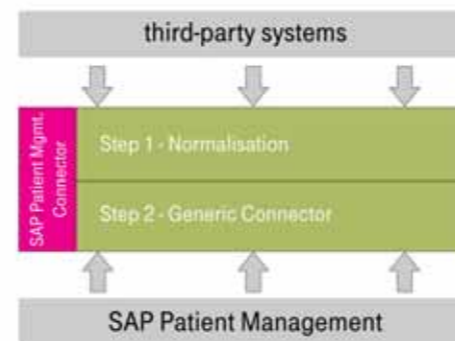
## „Towards an efficient solution with T-Systems.“

## The flexible interface solution for SAP.

The issue of interface management is gaining more and more importance in the healthcare sector. The need for interfaces arises continually as new systems are connected, e.g. a connection to a radiology information system (RIS), a lab information system (LIS) or even another hospital information system (HIS).

### T-Systems guarantees you optimal integration of systems.

We have the solution:



With the SAP Patient Management (IS-H) Connector, T-Systems offers an intelligent interface solution that meets all specific requirements of interface projects.

### The SAP Patient Management Connector is viewed as a two-step model.

In the first step, data are put into a normalized format with the help of a "Normalizer". In the second step, these data are booked in SAP patient management using a "Generic Connector".

## Automation of hospital registration.

### The e-card check-in (for SAP Patient Management).

This is a solution in the context of the Austrian E-Card, an electronic health insurance card targeted at patients. Simple registration, shorter waiting times, transparent information – patients experience a variety of benefits from integrating the e-card into the day-to-day clinical workflow.

A patient comes to hospital for a follow-up examination. He carries out the patient registration using his e-card at the info-terminal of the outpatient clinic. The data stored on the e-card is automatically transferred to the hospital information system. A search and identification of the patient is then carried out in the hospital information system.

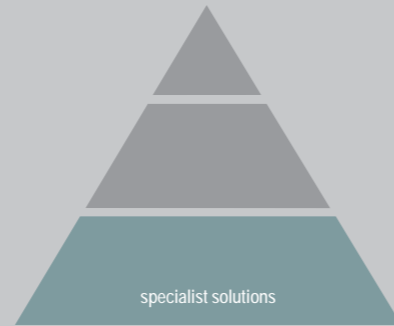
As a next step, the patient's upcoming examination appointments are shown on the touch screen. The patient confirms his appointment, which results in automatic registration at the hospital. After the registration, a diagram showing the way to the appointment is shown on the terminal.

The solution was optimized to be used in a completely intuitive way by the user: thus, for example, the display is adapted to the screen size, which makes scrolling by the end-user unnecessary.

### Use the advantages of the E-Card with T-Systems right away.



# The right solutions for everyone. Specialist solutions.



The requirements of specialist departments are more specific than those of a hospital. To meet these requirements T-Systems is constantly developing new solutions and interfaces such as the connection to the transport and logistics optimization of hermeskim.

## Image integration made easy.

The integration of a hospital information system (HIS), radiology information system (RIS) and picture archiving and communication system (PACS) allows efficient and rapid access to comprehensive diagnosis data within a hospital trust. Closely integrated processes between these systems reduces the risk of erroneous entries and thus increases the quality of medical information in all of the components involved.

### We have the solution:

The Basic Modality Worklist Management creates the connection between HIS/RIS systems and PACS/modalities. The Basic Modality Worklist Management interface is based on the DICOM 3.0 standard and can therefore be employed with any PACS/modality. Depending on the integration scenario, the DICOM supported transactions can be selectively activated. The Basic Modality Worklist Management can thus be adapted to the widest range of system landscapes.

With T-Systems, you are always in the picture.

### We do the integration into the HIS.

When the Basic Modality Worklist Management is employed in combination with i.s.h.med radiology, all SOAP-web services are implemented. These are necessary, as the communication of the Basic Modality Worklist Management with the HIS/RIS system takes place via these services. The components of the HIS/RIS are configured within i.s.h.med radiology. There is a web-based administration tool for the configuration of the Basic Modality Worklist Management.



„On the right path with T-Systems.“

## Connecting i.s.h.med to hermeskim®

Hermeskim® is a transport and logistics solution for hospitals, providing optimized, automated allocation of drivers for patient and material transport. This standardized connection of the i.s.h.med transport module to hermeskim® is based on web service communication. The interface was developed by T-Systems together with the producer of hermeskim®, thus ensuring an optimized and complete connection. Driving jobs can be created in i.s.h.med and then transferred to hermeskim® in an automated and syntactically correct way. The reverse is also possible by creating a driving job in hermeskim® and transferring it to i.s.h.med.

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