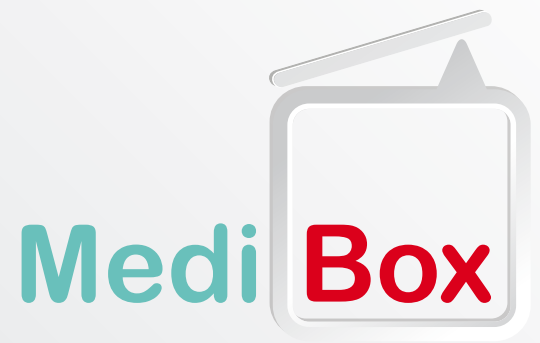




The innovative approach to a comprehensive health care system in developing countries



Issue

In countries with underserved health systems, centralised structures usually exist for health care of the population. The large hospitals in the cities are only accessible to a limited number of people.

Structural deficits in planning, development and an inefficient supply of the rural population are the causes of high morbidity and mortality due to infections and common diseases.

Requirements

In a modern healthcare system, there should be a standardised and high quality health care system for nearly all residents of a country.

Especially in the rapidly growing emerging economies, the good health of the population is an absolute necessity for the further growth of these countries.

All important examination methods, including ultrasound, endoscopy and diagnostic radiology (incl. computer tomography) should be available as an option, alongside a laboratory unit for diagnostic purposes.

„HEALTH of the population is a prerequisite for GROW“

Implementation of these guidelines

The hospital developer Klaus Ihle and physician Dr.med Franz Goss have developed the concept of MediBox in recent years following their intensive research, especially in the emerging markets of South America, Africa and Eastern Europe.

A timely realisation of the points mentioned above is made possible by the innovative design of MediBox.

The proven and carefully thought-out layout and equipment in the treatment and functional rooms ensure structured and optimal patient logistics.



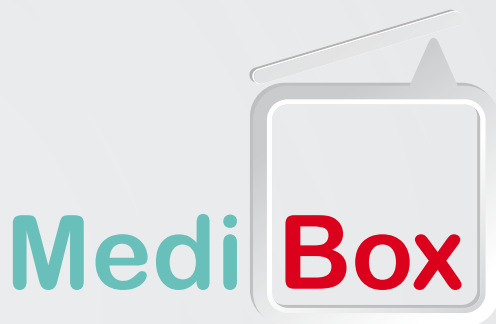
A problem-solving approach

The decentralisation of medical facilities is a prerequisite to reliably provide a large proportion of the population with a high standard of medical services.

The new health care facilities should be designed as small polyclinic units with a wide range of diagnostic and therapeutic tools. Ideally, the units should be designed such that they are as standard-

ised as possible and offer a wide range of medical services for basic needs of the population (Internal Medicine with Cardiology and Gastroenterology, surgery, ENT, ophthalmology, orthopaedics, X-ray and laboratory).

A patient can be handled very quickly, from the assumptions about the diagnosis through to surgery and if necessary up to therapy.



- Wide therapeutic spectrum:
- Internal Medicine with Cardiology and Gastroenterology, Surgery, Ophthalmology, ENT, orthopaedics, X-ray and laboratory
- Clinical / diagnostic spectrum:
- Ultrasound, endoscopy, X-ray diagnosis, including computer tomography (optional) as well as a laboratory unit
- Flexible expansion of the polyclinic for inpatient stay

Production time

In terms of quality and durability, MediBox is an equivalent alternative to solid construction. However, the design consisting of space cells offers an unbeatable advantage, especially in terms of economy, investment security and sustainable construction.

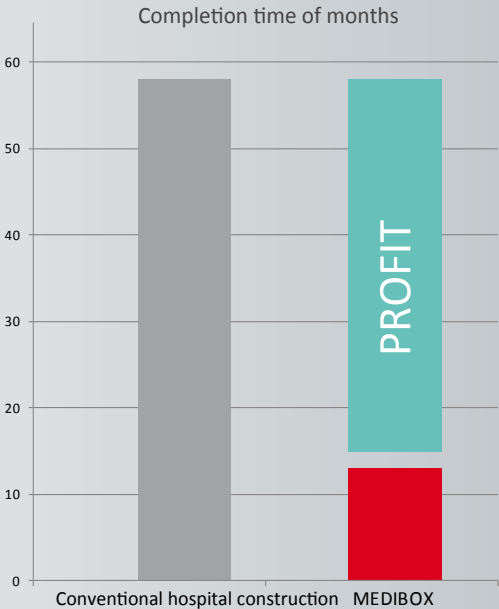
In a construction period that is shorter by up to 70%, MediBox is produced through a sustainable construction method at a fixed price and in a fixed time that can be flexibly adapted to needs at any time.

Transport

The transport of the Medibox from the production plants to the respective site takes place in containers. All the equipment, including complete medical, laboratory and building technology as well as tiles, curtains and facade parts are included here.

Thanks to the unification of services, transportation is economical and ecological even over longer distances. At the installation site, Medibox is set up in a few weeks and connected to a turnkey building.

„A smart
INVESTMENT
will yield
FAST“



Minimal preparation time

The modular configuration of Medibox and its design ensure an extremely short preparation time between order placement and delivery of the polyclinic with full medical function. Ideally, a time period of 1 year should be planned between ordering and the delivery of the operational Medi-box.

This means a return-of-investment within a very short time as compared to a conventional hospital building - about a quarter of the time.

Production

The precise manufacturing processes of MediBox are based on proven, standardised processes that are prerequisites for the quality, durability and service life of the structure. 90% of the work is already completed in the production plants, irrespective of weather conditions, under constant quality control, on time and in an economical way.

With the individual sanitary, heating, air conditioning and electrical systems combined, extensive expertise comes together in one place.

Construction phases in months	Conventional hospital construction	MediBox
Project development	10	0
Tendering/ Planning	6	0
Tender award	3	0
Planning	3	3
Tender of the contract	6	0
Award of contract	3	0
Tender of devices and equipment	6	0
Award of devices and equipment	3	0
Intermediate calculations	2	0
Construction phase	12	7
Installation of medical devices	4	2
Completion time in months	58	12

YIELD

The design and manufacturing take place efficiently and parallel to the foundation works on site. The specific requirements regarding quality, statics and hygiene in the clinical and laboratory area are already set as a priority in the development and planning stage.

The MediBox therefore meets the physical requirements related to fire, sound and heat protection. At the site of the setup, only a reliable connection to electricity, water and sanitation needs to be ensured.



Standardised concept through modular construction technology

The modern modular construction method provides environmental protection, recycling and energy efficiency to buildings that are distinguished by their sustainability.

With the aim to minimise their environmental impact over the entire service life and to optimise the comfort of users, the modular design makes a valuable contribution to the development of „intelligent“ buildings of high environmental friendliness and sustainability.

Effective pre-production, clean and quiet assembly, and flexible structures are the major advantages of the modular building. Adjustability and recyclability of the main material steel strengthen the aspect of sustainability and help conserve natural resources and thus minimise the environmental impact.

Equipment list

The complete instrumentation of MediBox takes place according to a specified plan and description of the devices through regional and national manufacturers and contractors.

„MODULAR CONSTRUCTION method speeds up the PRODUCTION“

Flexibility and extensions

The MediBox was developed such that even the basic module covers a wide range of medical services. The flexibility of MediBox allows expansion of the building from sides and front with up to six floors through a combination of the modules.

Thus, little by little, a complete hospital with further functional areas and in-patients bed areas can be established at a polyclinic. Even after the

completion, the Medibox can be flexibly expanded or dismantled, exactly according to the needs. This is also an aspect of sustainability.

Another advantage is that due to the high degree of prefabrication and the construction time on site, the effects of noise and dirt are minimised. Thus, even during on-going hospital operation, new construction or renovation work can take place without major disturbances.



Dialysis module extension

MediBox can be flexibly configured. The basic module is intended for a wide range of polyclinic applications. However, it can also be adapted for specialised clinical requirements. MediBox can be made built in a very short time as a dialysis ward with 20 dialysis beds.

The high hygiene requirements of a dialysis unit are fulfilled economically and rapidly in MediBox dialysis as an external module for existing large clinics.



„COMPLETE
medical
DIAGNOSTICS
flexibly applicable“

Surgery

Orthopaedic treatment of injured patients
Out-patient surgical interventions in an operating
room with the highest standard of hygiene

Cardiology

ECG | Exercise ECG
Ultrasound diagnosis of the heart
and great vessels
Diagnosis and treatment of high blood pressure
and cardiac arrhythmias

Gastroenterology

Gastroscopy | Colonoscopy
Ultrasound examination of the abdominal organs

Otolaryngology

Conservative and surgical care
of the Department

Ophthalmology

Cataract and Glaucoma surgery
Correction of visual acuity disorders

Laboratory diagnostics

Conducting all the standard laboratory tests for
all conservative and surgical areas

Orthopaedics

Outpatient Trauma Surgery
(Fractures, craniocerebral trauma)
Conservative and surgical treatment of
disorders of the musculoskeletal system

Radiology

Conventional radiological diagnostics
with optional addition of a CT scanner
for all disciplines



Solar technology

It is possible to install a photovoltaic system in MediBox. The roof system can also be pre-installation in the production plants as desired and after clarification of the local conditions.

Telemedicine

MediBox offers a complete database for medication, clinical procedures (OPS, DRG) and diagnoses (ICD). There are interfaces for imaging in cardiology, technical examinations such as ECG, pulmonary function test, blood pressure measurement, exercise ECG, X-ray, chest CT examinations and magnetic resonance diagnosis.

By networking MediBox, all the requirements for telemedical applications are met. Especially in the field of imaging (computed tomography), telemedical consultative assessments can take place from an affiliated hospital.

„NETWORKING and modern technology provide INDEPENDENCE“

Hospital Information System (HIS) and patient information systems

All examinations and costs of a patient are centrally controlled. It is thus possible to follow the whole process continuously and to view the entire case history. The patient data is accessible by the doctors in original and not only as descriptive text at any point in the network.

A precise cost management system of the clinic or the individual departments is possible in real-time.



Nationwide network of MediBox

We transfer your data safely, reliably and with high data throughput via radio link - the fast way of wireless data transmission. Different sites are connected to each other in this way without expensive cables. Where conventional networks reach their limits physically and technologically, the radio link technology offers ideal conditions for a direct and wireless connection.

With our systems, data rates between 2 Mbit/s and 2.000 Mbit/s can be realised in different frequency ranges. Cutting-edge technology enables an outstanding transmission quality with very short lead times. The radio link is secured in advance with the aid of radio field planning and feasibility tests. All the equipment can be serviced by the national networking of MediBox via remote function. The maintenance is carried out by trained regional personnel.





MediBox

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