

Technical Due Diligence in Hotels

Early identification of risks and costs for structural repairs and refurbishment

Technical Due Diligence in the hotel sector is mainly about the assessment of the overall condition of a building's structure, fit out and installations, in particular with regards to building technology. The Due Diligence primarily aims at estimating expected costs of renovation and refurbishment within a defined time frame. If the costs of a toilet facilities' renovation, including the affected sanitary piping and systems, are not assessed upfront, for instance, these works will represent a high economic risk. Expenses for overdue maintenance and repair measures in hotels, especially when it comes to older properties, can easily reach a dangerously high cost level for the building owners concerned.

Technical and structural assessment is equally applied in the event of a hotel group acquiring existing properties in need to be adapted and updated to the group's current quality standard. One of the challenges involved is to exclude the so called 'deal breakers'. These are normally understood to be structural defects or local conditions, which cannot be remedied or raised to the desired standard. Among the pressing questions in an acquisition due diligence process is for example, whether the rooms in an existing hotel asset are adaptable at all, when update projects are envisaged. Another important issue to clarify early in the process is to check the floor plans as to how and if breakfast areas or lobby can be realised in the group's standard size and quality.

Evaluation of costs and risks in building technology

Depending on age and intensity of use of an asset and its technology, fix guidance values on expected costs and risks are usually hard to determine. Sometimes due diligence studies are being executed prior to the final completion of a construction project, in order to match the current state on the construction site with the contractual building specifications/ documentation. In the event of detected derivations, it is of importance to initiate prompt measures. In this case, the costs for maintenance and repair would be nil, since the focus is still placed on quality assurance in the context of the contractually owed performance. If a due diligence refers to 10 to 20 year old existing hotel properties, it is usually the entire building technology, plus parts of the external envelope, that need to undergo renovation.

A cost forecast is drafted wherein expected costs are usually spread over a period of 10 years, categorised in *short-*, *medium-* and *long term* cost items. *Short term* (0 years) applies for immediate measures, which become necessary in the event of defects relevant to security. This could be a defect of the fire alarm system for instance; another example is a measure that is solely executed in order to prevent further damages, such as a dosing system protecting the pipe structure against consequential damages caused by limescale, and thus avoiding a full pipe replacement. The operating costs for heating, cooling, electricity and water are highly dependent on the facility's overall technical condition. This is why recommended examinations in the years 1 to 5 (*medium term*) as well as after 6 to 10 years (*long term*) aim at identifying measures that are most likely to become necessary on the grounds of the condition of technical installations and their respective age, in order to maintain optimal performance and functionality in the medium term. This shall enable operators at an early stage to

prepare maintenance plannings sensibly reconciling forecast and cost-saving repair and refurbishment measures.

Most current defects in hotel assets

Among the frequent defects detected in hotels are hygiene shortcomings in relation to the drinking water installation. These occur, if stubs are not regularly flushed. This problem can be easily and effectively avoided by installing fittings equipped with automatic flushing. Refrigeration plants installed on roofs of older properties often lack the required restraint systems for water-polluting substances, such as refrigerants, which are mandatory according to the *official regulation on facilities about the handling of water-polluting substances ('AwSV')* since 2017. In this context, there is a clear commitment by the building owners to retrofit. Furthermore smaller fire safety defects are repeatedly detected, uncovering missing fire retarding sealings at cable and pipe openings. It is often observed, that thermal loads are stored in plant rooms, diverting those technical rooms from its intended use.

Serious costs

Due to the limited useful life of equipment and technology, as early as 10 years upon start of use, higher investments are likely to become necessary. Renewal measures become unavoidable, particularly with regards to bathroom and sanitary items, at the latest upon the appearance of signs of wear and tear.

The exchange of air-conditioning and refrigeration plants require an investment of 500 to 1,000 Euro per room, since maximum service life amounts to approx. 15 years. Experience shows, that fire alarm as well as IT systems have usually reached their end of service life after as early as 15 years and need to be renewed. Against this backdrop, the technical due diligence provides the investment planning for the required/ expected maintenance and refurbishment of the assets' technical equipment. Experience also shows, that it is recommendable to carry out the TDD every 5 years. Hotel operators thus obtain a high level of control over costs in connection to maintenance and investments, while they are at the same time able to prevent disinvestments by carrying out subsequent and late repairs.

Systems requiring inspections and being relevant to security in hotel building services

Type of Installation, Legal Basis	Inspection Interval
Test using 'SPrüfV § 2 Abs. 1' (inspection order on security alarm systems)	36 months (technical experts)
Ventilation systems	
CO warning system	
Smoke extract systems, mechanical	
Automatic fire extinguishing systems	
Non-automatic fire extinguishing systems, wet	
Fire alarm and warning systems	
Speech alarm system SAA	
Emergency power supplies, 'NEA' (emergency power system)	
Safety lighting systems	
Test using 'SPrüfV § 2 Abs. 4' (inspection order on security alarm systems)	36 months (competent person)

Fire protection closures, automatic sliding doors in escape routes, doors with electrical interlocks in escape routes, protective curtains, lightning protection system, fire dampers in ventilation systems, portable fire extinguishers

Test using 'BetrSichV § 15'

(workplace safety ordinance)

12/24 months

Passenger-, freight-, goods elevators

Lift for the disabled, facade lifts

Escalators and passenger conveyors

Liquid plants (tanks)

Refrigeration plants

60 months

Test using 'VVB § 9'

(fire prevention ordinance)

24 months

Extractor fan systems (not in private households)

Test using 'TrinkwV §14 Abs. 3'

to detect legionella *(drinking water ordinance)*

Ö: 12 months;

G: 36 months

Drinking water (public, commercial)

Test combustion plants 'BImSchG,

BImSchV', 'TA Luft'

(federal pollution control act/

federal emission control ordinance/

technical instructions on air quality)

12 to 60 months

Plants for solid fuels

Plants for liquid fuels

Plants for gaseous fuels

Fire inspection (FBV) at special constructions

36 to 60 months

After completion

During use

Hygiene Tests

Ventilation systems according to VDI 6022 (hygiene tests of HVAC plants)

24 months (with air humidifier) resp.
36 months (without air humidifier)

Due Diligence Objectives and Methods

Objectives:

- Documentation of maintenance backlog
- Forecast on future investment need
- Short-, medium- and long- term budgeting
- Claim Management – Securing of warranty rights and other rights against third parties
- Reduction of technical risk of default
- Preparation of letting and sale

Methods

- Property scans
- Technical Due Diligence
- Professional inventories on building structure, technical installations and fire protection
- Defect documentation across trades and warranty management
- Conformity assessment on compliance with building permit and with applicable standards and guidelines

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