The heart of your building™

MODERNIZATION - A VERY INTERESTING GROWTH OPPORTUNITY

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CONTENTS

WHAT IS MODERNIZATION

Modernization is a solution for customers who have an existing equipment. The span of the equipment is very wide:

- Repairs, keeping the equipment in service with similar safety and performance level
- Upgrades, improving the safety, performance, accessibility or aesthetics of the equipment
- Full Replacement, state of the art into an existing shaft

WHY TO MODERNIZE

- Four major drivers for this activity
  - Safety
  - Accessibility
  - Performance
  - Aesthetics

- Customer behaviour
  - Proactive
  - Rational
  - Wait and See
  - Resistant

HOW TO MODERNIZE

- One must understand the mix
  - Status of the equipment
  - Customer business
  - Customer budget
  - Technical feasibility
- Therefore, this activity requires a high level of expertise

MARKET TRENDS

- SAFETY is the premium driver
  - ✓ Due to the age of the equipment
  - ✓ International norms
  - ✓ Enforcement through local laws
- Upgrading of existing buildings
- “Responsible” behavior

ESTIMATE GLOBAL MARKET SIZE 2006

- Total Market — EUR 4.5 – 5.0 billion
  - Europe — EUR 2.6 billion
  - North America — EUR 1.6 billion
  - Asia-Pacific — EUR 0.3 billion

ESTIMATED GROWTH OF THE MODERNIZATION MARKET

- KONE estimates the growth the coming years to be more than 10%

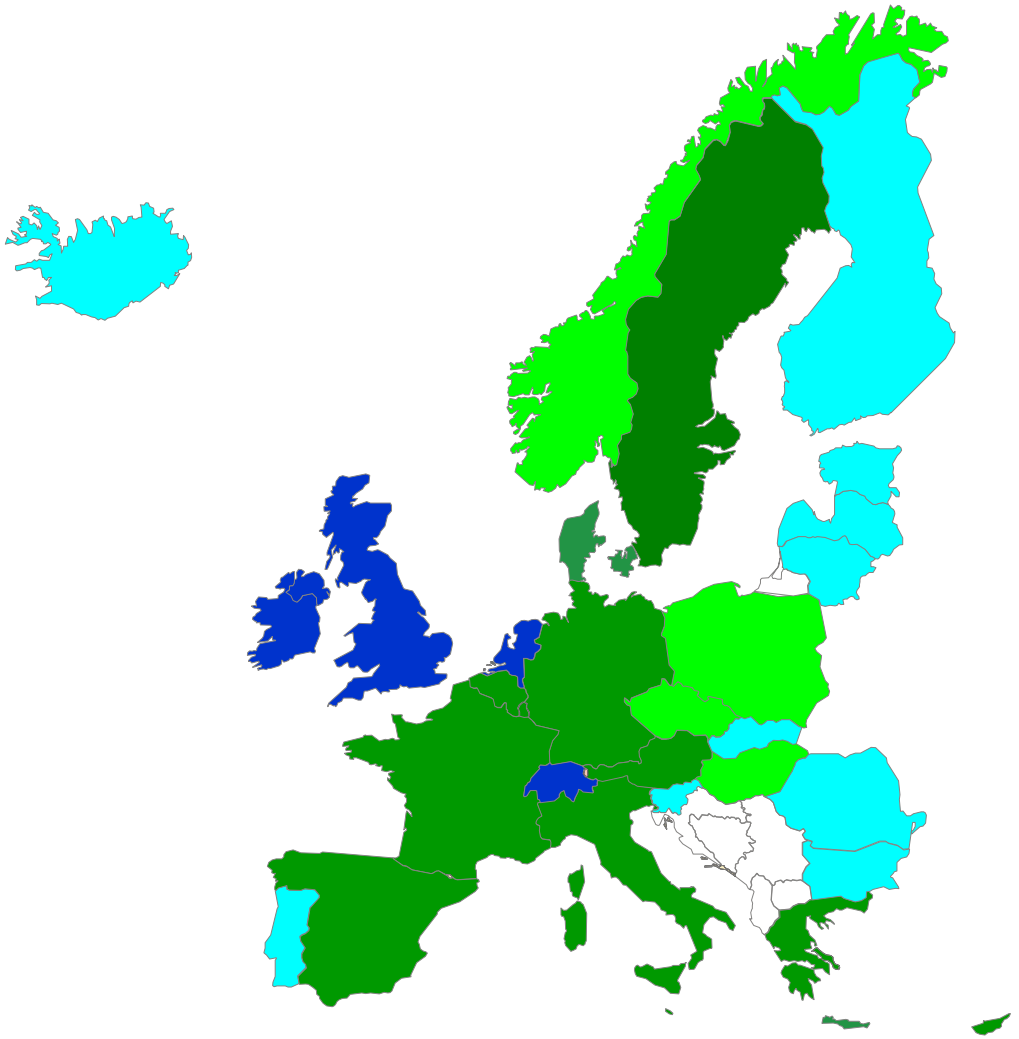
KONE'S MODERNIZATION GROWTH 2006

- Orders received growth in Modernization was higher than KONE total orders received growth
- Sales growth in Modernization was higher than KONE total sales growth

SAFETY

- 1995
  - European Commission introduced a recommendation in 1995 (called 95/216/EC), presenting 10 priority points to improve
- 2003
  - CEN – European Committee for Standardization developed a standard to address safety for existing lifts (EN81-80), referred to as Safety Norms for Existing Lifts (SNEL)
- Now
  - National laws

SNEL
Overview of National Legislations in Europe



- National laws have been introduced
- National laws in preparation
- Preparation for national laws to be started
- Existing national laws (specifically UWED) cover part or all of SNEL points

SAFETY
Overview of National Legislations in Europe

	Country	Implementation
	Austria	2007-2012
	Belgium	2005-2018
	Bulgaria	
	Cyprus	Schedule to be decided
	Czech Republic	Deadlines to be decided
	Denmark	Most of the work has completed.
	Estonia	
	Finland	Every modernisation is linked to SNEL.
	France	2008-2018
	Germany	No Deadlines
	Greece	2006-2013
	Hungary	Schedule to be decided
	Iceland	
	Ireland	No Deadlines
	Italy	2007-2013

	Country	Implementation
	Latvia	
	Lichtenstein	
	Lithuania	
	Luxemburg	No Deadlines
	Malta	2009-2012
	Netherlands	No Deadlines
	Norway	Schedule to be decided
	Poland	2012-2022
	Portugal	
	Romania	
	Slovakia	
	Slovenia	
	Spain	2007-2013
	Sweden	No Deadlines
	Switzerland	No Deadlines
	United Kingdom	No Deadlines

SAFETY
SNEL in other markets

- Singapore
  - Considering to apply SNEL
- Hong Kong
  - Investigating the possibility to apply SNEL
- China
  - An industry working group has completed the filtering process
- Unites States
  - The states have implemented standards independently based on the codes of the American National Standards Institute (ANSI)

LIABILITY

- Increasing number of customers are concerned about safety and many SNEL principles apply even in absence of SNEL regulation
- Increased liability drives the willingness to manage the risks
- Increased worker safety is also progressively taken into account

MODERNIZATION CHALLENGES

- Customer focus is a must
- Engineering knowledge is a must
- Industrialization is a must

KONE ANSWERS

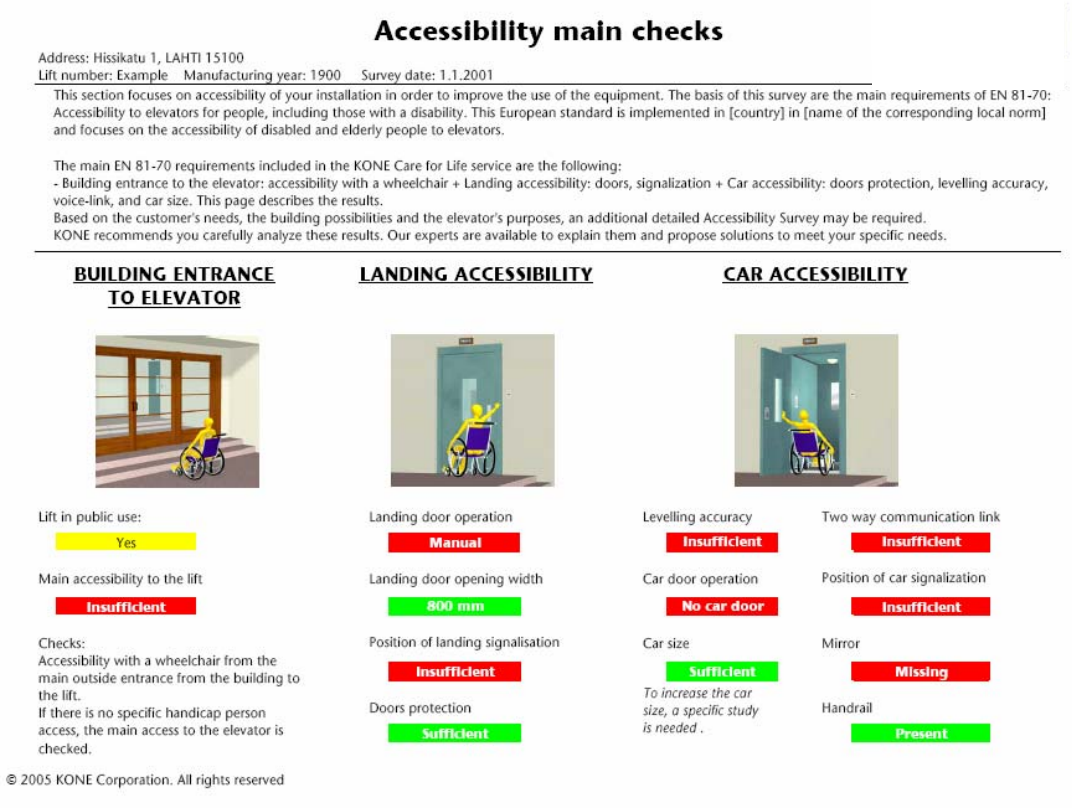
- Our motto:

  “KONE helps its customers to make the right choice”

KONE ANSWERS
- KONE CARE FOR LIFE

- Provides to KONE customer a thorough audit of the equipment in terms of
  - Safety
  - Accessibility
  - Performance
  - Aesthetics

- Allows a ranking of the priorities and multi year budgeting together with the customer



Accessibility main checks

Address: Hissikatu 1, LAHTI 15100
Lift number: Example Manufacturing year: 1900 Survey date: 1.1.2001

This section focuses on accessibility of your installation in order to improve the use of the equipment. The basis of this survey are the main requirements of EN 81-70: Accessibility to elevators for people, including those with a disability. This European standard is implemented in [country] in [name of the corresponding local norm] and focuses on the accessibility of disabled and elderly people to elevators.

The main EN 81-70 requirements included in the KONE Care for Life service are the following:
- Building entrance to the elevator: accessibility with a wheelchair + Landing accessibility: doors, signalization + Car accessibility: doors protection, levelling accuracy, voice-link, and car size. This page describes the results.
Based on the customer's needs, the building possibilities and the elevator's purposes, an additional detailed Accessibility Survey may be required.
KONE recommends you carefully analyze these results. Our experts are available to explain them and propose solutions to meet your specific needs.

BUILDING ENTRANCE TO ELEVATOR

Lift in public use: Yes

Main accessibility to the lift: Insufficient

Checks:
Accessibility with a wheelchair from the main outside entrance from the building to the lift.
If there is no specific handicap person access, the main access to the elevator is checked.

LANDING ACCESSIBILITY

Landing door operation: Manual

Landing door opening width: 800 mm

Position of landing signalisation: Insufficient

Doors protection: Sufficient

CAR ACCESSIBILITY

Levelling accuracy: Insufficient

Car door operation: No car door

Car size: Sufficient
To increase the car size, a specific study is needed .

Two way communication link: Insufficient

Position of car signalization: Insufficient

Mirror: Missing

Handrail: Present

KONE ANSWERS
- KONE PRODUCTS, A UNIQUE PRODUCT LINE

- Full Replacement
  - KONE MonoSpace R2.5
    - Based on **EcoDisc®** proven technology, full benefits of the NEB product line
  - KONE MaxiSpace R2.0
    - Based on **PowerDisc®** unique new technology, it offers up to 50% additional space
  - KONE Ecomod
    - Unique modernization solution
- Packages Modernization
  - ReGenerate
    - Using the same revolutionary hoisting unit than MaxiSpace
- MMS
  - Step By Step modernization

ELEVATOR WORLD
- PROJECT OF THE YEAR

2005

Project of the Year

Category 3
Escalator Systems

Moscone Center ECOMOD™

by Scott Brugh

Escalators, one of the engineering marvels of the post-World War II era, are entering old age. Facilities like the Moscone Center in San Francisco – one of the busiest convention, trade show and meeting facilities in the country – are now faced with a major decision: How best to upgrade their escalators in a manner that is cost-effective and minimizes disruption to the facility.

In the oldest portion of the facility, Moscone South, the six escalators – two at the east end, two in the center and two on the west – were feeling the effects of two decades of year-round usage. Designed as part of the original structure, the six Westinghouse modular escalators were showing their age.

The Moscone Center and its management company, SMG of Philadelphia, looked at replacement alternatives for the escalators – all of which were costly, involved major structural work in the facility, and would inconvenience the center's customers, the trade associations and other organizations who book their shows and events months, even years, in advance.

The bid accepted by the Moscone Center was from KONE Inc. for its recently introduced ECOMOD escalator modernization solution. KONE developed ECOMOD as a modular package that replaces the existing escalator with new, technologically advanced components that fit inside the existing escalator truss. The Moscone Center is the first application of the ECOMOD package in North America. ECOMOD construction results in no structural impact on the facility, at a cost significantly lower than a complete escalator replacement and provides the customer with a brand new escalator inside the existing truss.

2005

MKT-02-01-2005 1/19/05

2006

Category 4
Escalator Systems, Modernization

by Kellie Lindquist

O'Hare International Airport

There is not a moment when the O'Hare International Airport in Chicago isn't bustling. And because it is one of the busiest airports in the world, KONE faced unique challenges when 23 escalators – used by thousands of people daily – needed to be upgraded. Escalator installation was required in all three airport terminals brimming with so many people that KONE was required to install one of two side-by-side units while keeping the other unit operating.

"We had to work within the constraints and demands of one of the busiest airports in the world," noted Tim Callahan, KONE Inc., Chicago project manager. "A major concern was to maintain limited interference to passenger traffic flow. We had to operate within a very constricted work area. In an environment that operates 24 hours a day, trying to be as non-intrusive as possible is no easy task."

O'Hare International Airport

"Replacing an escalator used to mean ripping everything out, which needs a lot more space to work and requires a lot more infrastructure (walls, floors [and] ceilings) to be repaired or replaced after completely removing the truss," added Jeff Hanson, KONE regional modernization manager.

"We came up with a number of improvised barricading systems and safety devices to put in place so that both the workers and the passengers riding next to the units that were being installed were safe at all times," Callahan commented. "That met the strict approval process of the [Department of Aviation] DOA and the managing construction company. It was a challenge."

The KONE ECOMOD proved the best choice for O'Hare International Airport's upgrade, since extensive construction was not an option.

2006

2007

Project of the Year 2007

Category 4
Escalators, Modernization

George Washington Bridge Bus Station

by Dharam Pal, PE and Cheng Chong, PE

As a public agency, the Port Authority of New York and New Jersey manages and maintains the George Washington Bridge Bus Station, an essential transportation facility for Upper Manhattan in New York City. The station has three levels: the main concourse with shops and ticket sales, the lower level with local bus and subway stops, and bus platforms on the upper level. To facilitate the movement of people between each level, 14 Otis Type R escalators were installed. These escalators have been in service since the station was opened in 1963.

George Washington Bridge Bus Station

Located in the Washington Heights area, the station occupies a two-block site at 4211 Broadway between 178th and 179th streets, and Fort Washington and Wadsworth avenues. It has served as a vital link to the regional transportation network for approximately 20,000 daily commuters, and is located directly above the 12-lane Trans-Manhattan Expressway.

Due to their age (more than 40 years of heavy use), the lack of availability of spare parts and equipment malfunctions, these escalators are periodically taken out of service. Furthermore, safety codes for escalators have also changed over all these years. It became a challenging task to reduce escalator downtime and ensure customer safety and reliability of the vertical-transportation system. Two alternatives, rehabilitation and replacement, were evaluated. The evaluation revealed that each alternative has its technical challenges.

Rehabilitation involved removing major components of an escalator, replacing them with new or reconditioned parts, and reconditioning the driving machine — keeping only the original outer shell and truss. Since the existing escalators were of a 1960 design, the replacement parts were difficult to obtain. Some were no longer available from the original manufacturer

KONE ANSWERS
- PROCESS EXCELLENCE

- KONE has been active in the modernization market since the mid 90’s

- Global development for modernization of a business system started in 2005
  - Global products
  - Logistics
  - Installation methods

KONE IS IN A GOOD POSITION

- Strong customer focus
  - KONE Care for Life
    - Safety
    - Accessibility
    - Performance
    - Aesthetics
- Technology leader
- Best in Class supporting processes and systems
- Strong Global Production Network
- Devoted personnel

SUMMARY

- Modernization is a growth market driven by
  - Safety
  - Liability

- KONE has a very good position to take advantage of the growth
  - Care for Life
  - Unique products
  - Process excellence
  - Global Production Network

www.kone.com