EN 81-20/50 : The biggest Evolution of Lift Norms ever

Wolfgang Adldinger

October 2015

WITTUR

WITTUR CUBE

#innovation
#green
#modernization
#highperformance
#newbuildings

safety in motion™

VFA INTERLIFT E.V. VERBAND FÜR AUFZUGS-TECHNIK

Interlift 2015
VFA-Forum

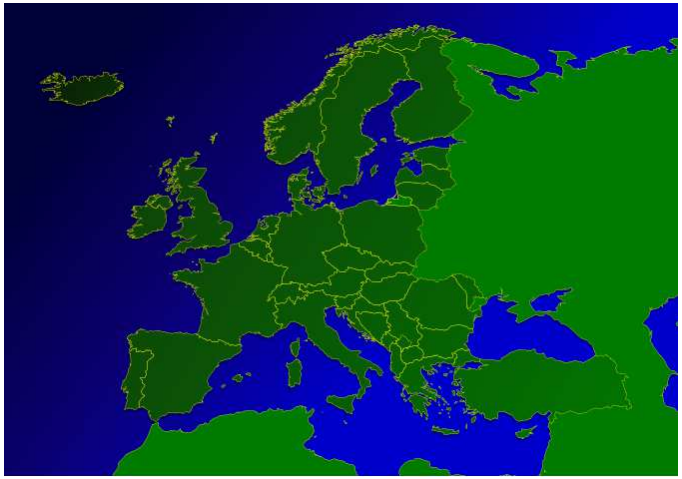
interlift 2015

Copyright 2015 by Wittur. All rights reserved

Background

- General information:

  - Around 14,0 million existing elevators worldwide
  - Worldwide new installation about 800.000 units/year



  - About 5,8 million existing elevators in Europe
  - Europe new installations ~124.000 units/year
  - In Germany
    ~ 20.000 new
    installations/year

Copyright 2015 by Wittur. All rights reserved

Trends of the elevator market

MAIN FOCUS AREAS

- SAFETY
- ACCESSIBILITY
- ENERGY EFFICIENCY
- ENVIRONMENTAL ISSUES
- GLOBAL HARMONIZATION
- ATTRACTIVENESS OF THE INDUSTRY

EN 81-20/50

Vision

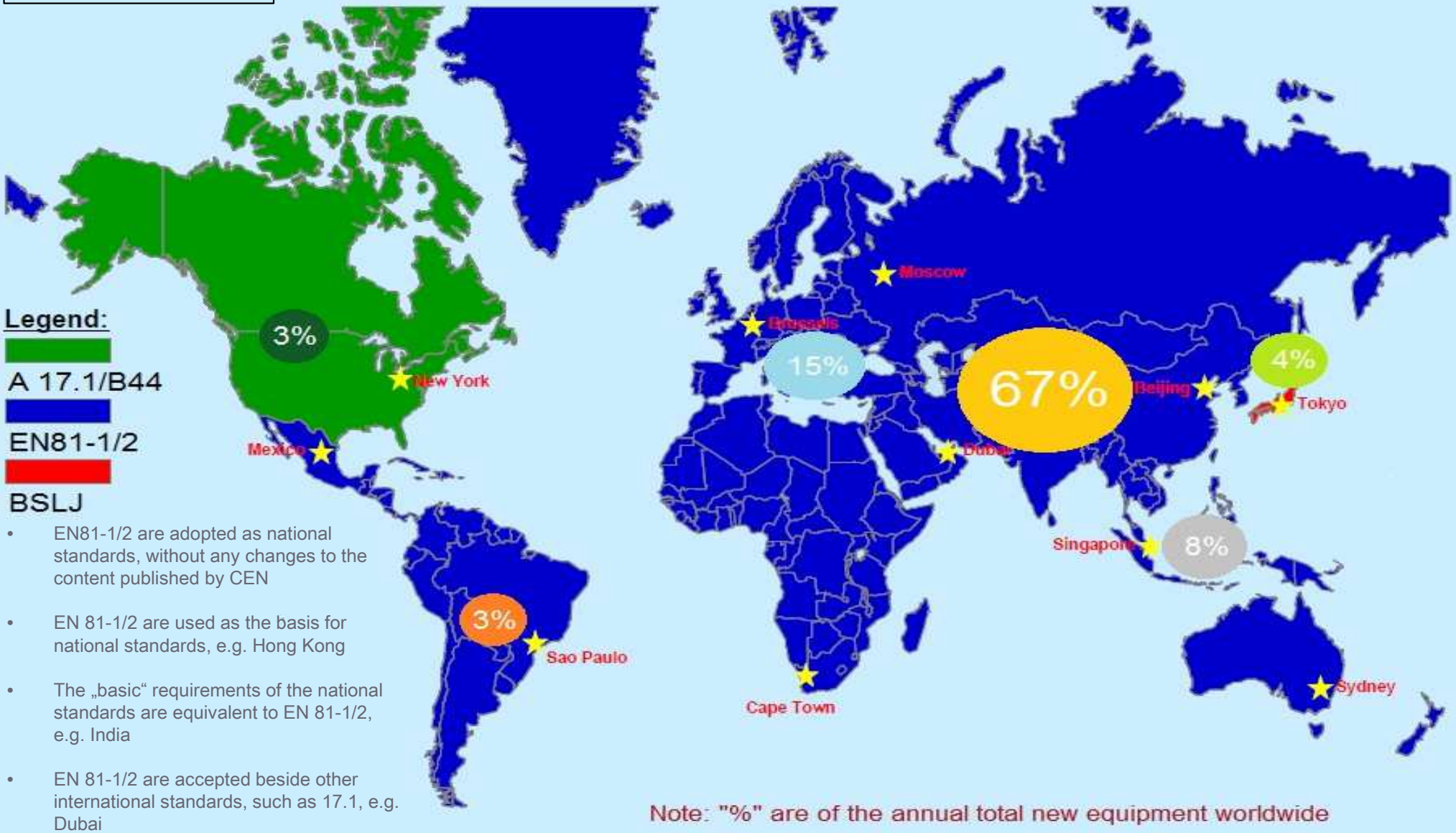
Same safety level for passengers and workers worldwide

safety in motion™

Copyright 2015 by Wittur. All rights reserved.

EN 81-1/2 influence around the world (2014)

Data from CEN TC10



- EN81-1/2 are adopted as national standards, without any changes to the content published by CEN
- EN 81-1/2 are used as the basis for national standards, e.g. Hong Kong
- The „basic“ requirements of the national standards are equivalent to EN 81-1/2, e.g. India
- EN 81-1/2 are accepted beside other international standards, such as 17.1, e.g. Dubai

Copyright 2015 by Wittur. All rights reserved

Major deficits of the EN 81-1/2

- Majority of the worldwide countries are using the EN 81-series
- EN 81-1/2 is over 30 years old and no longer state of the art

- Trading barriers between the different continents

need GTBFT ("Global Technical Barrier Free Trade")

safety in motion™

Copyright 2015 by Wittur. All rights reserved

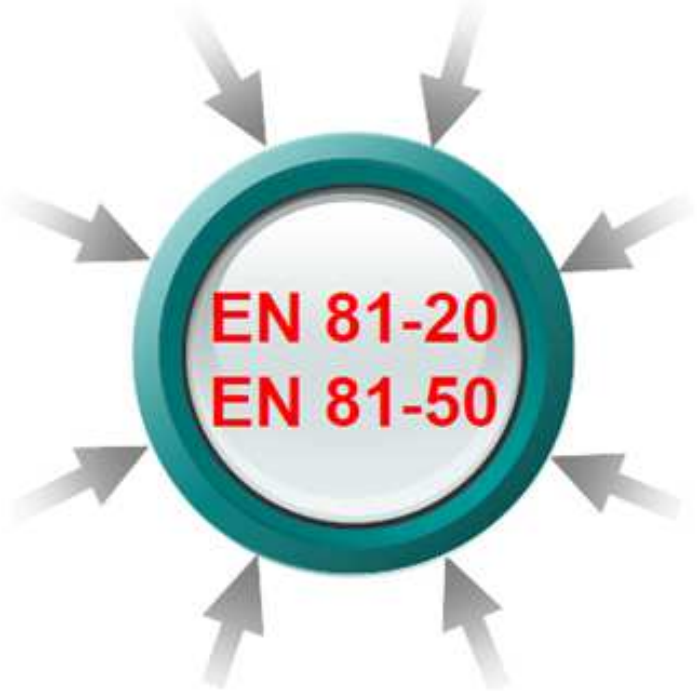
Preparation for revision of EN 81-1/2 >> EN 81-20/50

Text of EN 81-1 & EN 81-2 and Amendments

Interpretations

Comments from International interest groups
- *China*
- *Asia Pacific*
- *North America*
- *other countries*

Comments from European interest groups
- *EU Commission*
- *Notified Body for Lifts*
- *Trade Associations*
  - *ELA*
  - *ELCA*
  - *EFESME*
  - *etc.*



Comments Outstanding from previous revisions

Standardisation Requirements
- *CEN Guides 4,6,12*
- *CEN Guide 414*
- *CEN Consultant*

Legislative
- *Lifts Directive*
- *Machinery Directive*
- *Low Voltage Directive*

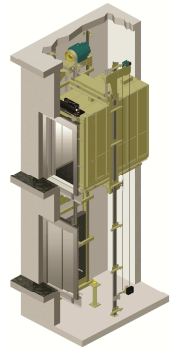
Ease of use and Maintenance

More than 700 items for revision were identified !

Copyright 2015 by Wittur. All rights reserved

EN 81-20 and EN 81-50, Revision of EN 81-1 and EN 81-2

- Result of revision of EN 81-1 and EN 81-2, > <u>Two new standards</u>



EN 81-20: *Requirements for complete passenger or goods passenger lift installations independent of the driving system*

EN 81-50: *Description of the examinations, calculations and tests of lift components used in any type of lift (passenger, goods passenger, goods only lift, etc.)*

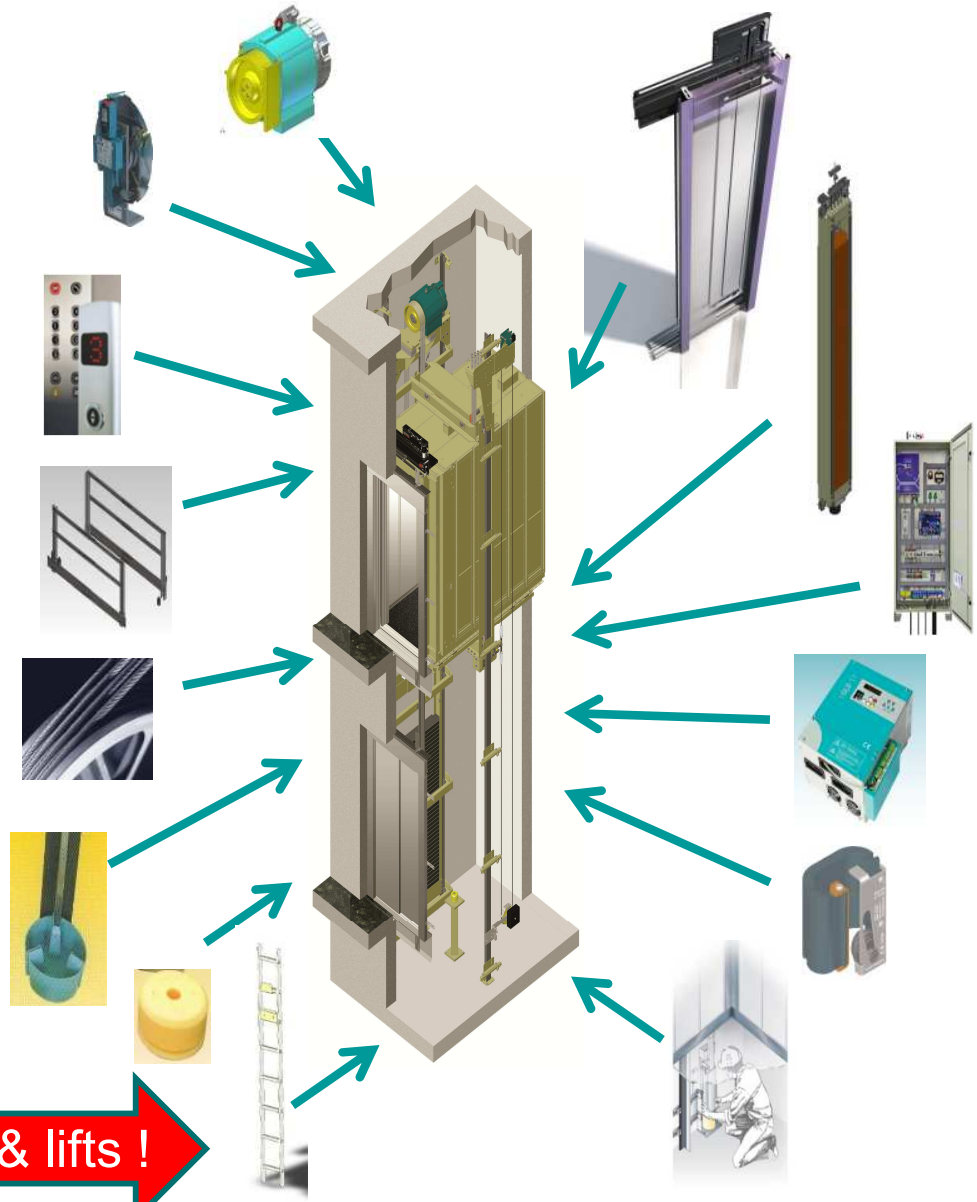
- New format for the standards, with many changes to all aspects and many new or improved safety provisions

Copyright 2015 by Wittur. All rights reserved

Example of affected components acc. to the EN 81-20/50

- Major affected components:
  - Landing Doors
  - Car doors
  - Safety devices
  - Slings / Frames
  - Cars
  - Electric drives
  - Hydraulic drives
  - Lift controller
  - Electric equipment
  - Well components
  - Complete lifts
  - ….

Modification of all components & lifts !



safety in motion™

Copyright 2015 by Wittur. All rights reserved

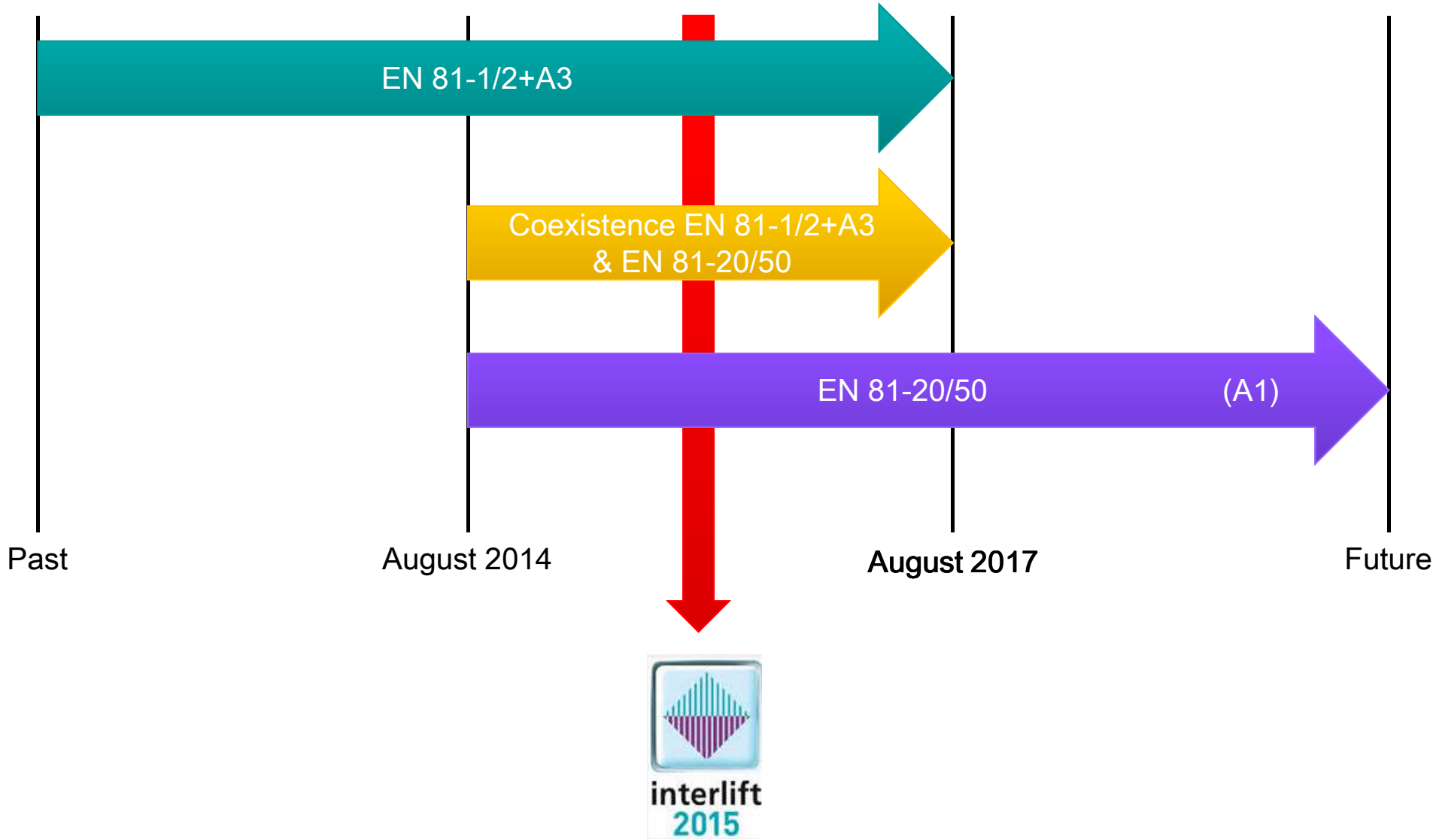
Procedure for Elevator companies

- Recommendation for EN 81-20/50 implementation

1. Participation in norm committees/associations
2. Norm ordering
3. Norm analyses
4. Comparison EN 81-1/2 + A3 to EN 81-20/50
5. List of significant changes for component
6. Components modifications/check product portfolio
7. Clarifications with norm committees/Notified Bodies
8. New certificates for safety components, components, lifts
9. Actualisation of the relevant documentation
10. Training/Information

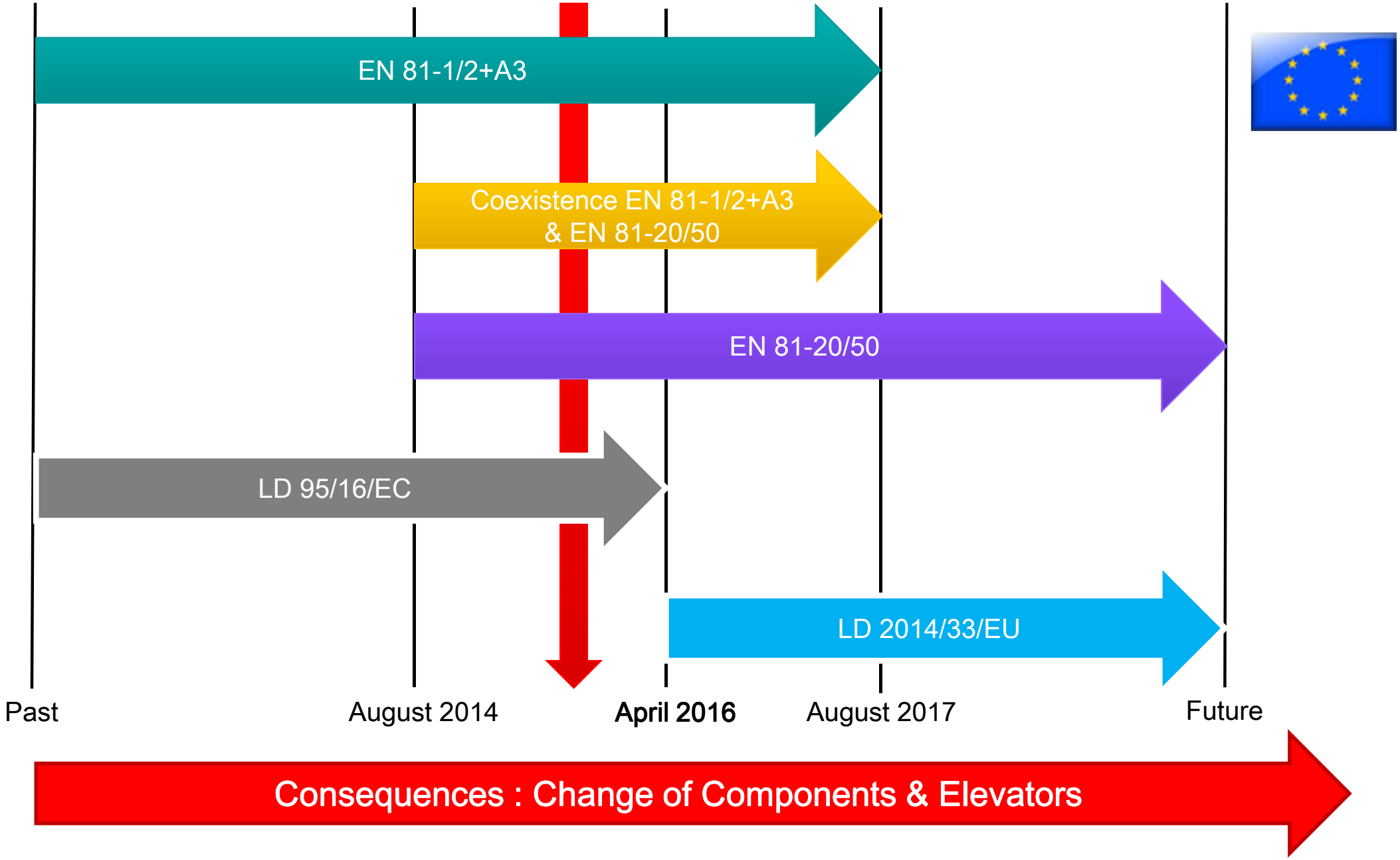
Copyright 2015 by Wittur. All rights reserved

Timetable for the EN 81-20/50



Copyright 2015 by Wittur. All rights reserved

Timetable for the EN 81-20/50 and EU-Lift Directive

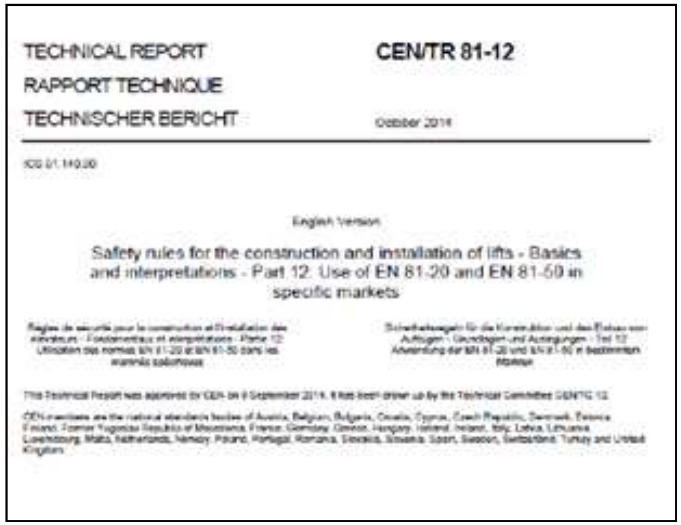


Copyright 2015 by Wittur. All rights reserved

CEN/TR81-12 – Outside of Europe

- Use of EN 81-20 and EN 81-50 in specific markets

- Based on the comments received from ISO non-European members during the prEN 81-20/50 CEN Enquiry



TECHNICAL REPORT
RAPPORT TECHNIQUE
TECHNISCHER BERICHT

CEN/TR 81-12

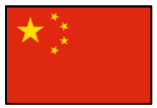
October 2014

English Version

Safety rules for the construction and installation of lifts - Basics and interpretations - Part 12: Use of EN 81-20 and EN 81-50 in specific markets

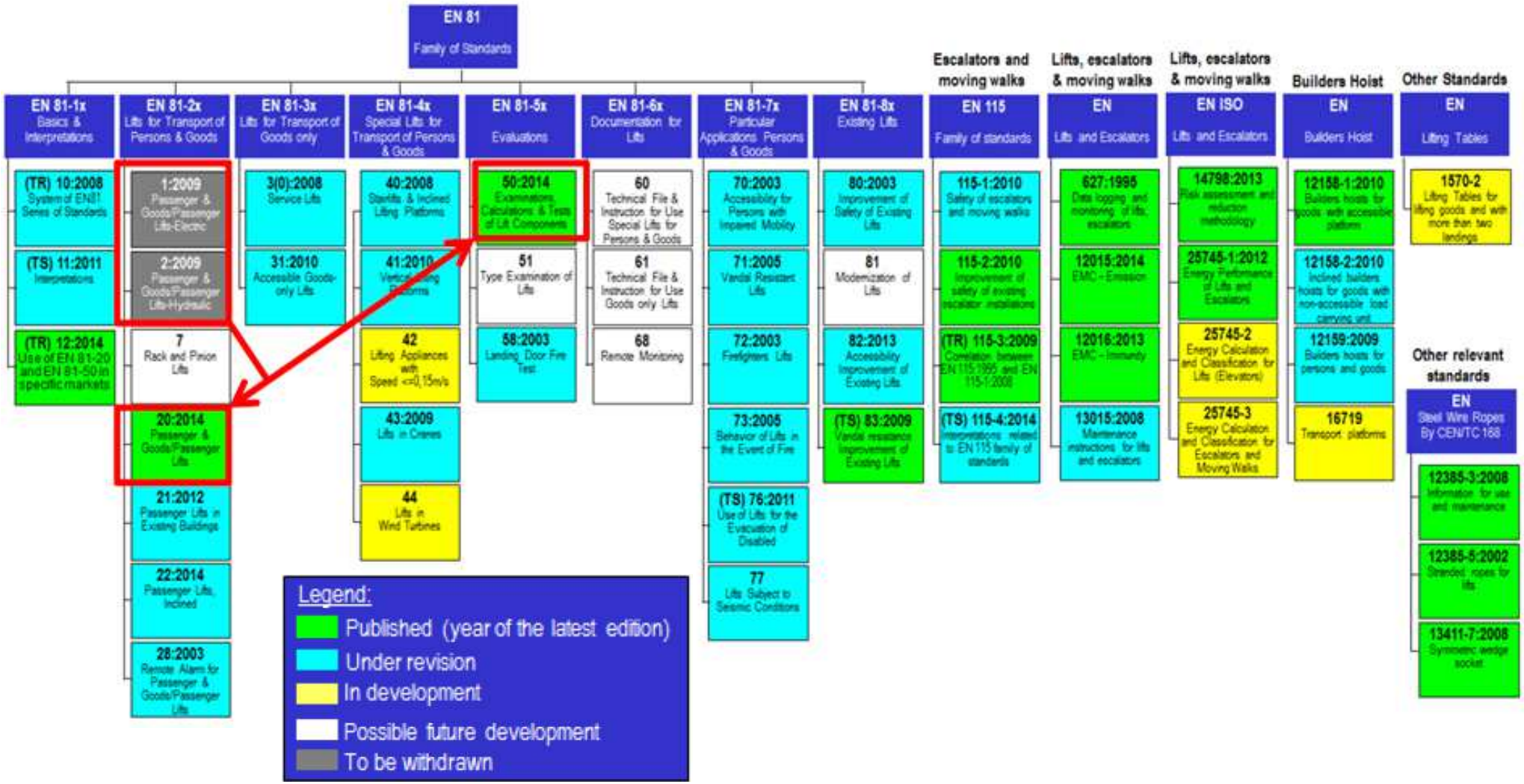
- It provides
  - Comparison of clause numbers of EN 81-1/2 and EN 81-20/50
  - Explanation on the basics of EN 81-20/50, for example of „shall“, „should“, etc.
  - Some guidance on how to align the EN 81-20/50 requirements with national regulations (outside Europe)

- China : EN 81-20/50 → GB7588:A1 → Mid of 2016
  → GB7588/1/2



Copyright 2015 by Wittur. All rights reserved

EN-Lift Norms > influence of the EN 81-20/50



Copyright 2015 by Wittur. All rights reserved

Norms influenced by change from EN 81-1/2 to EN 81-20/50

Affected Standard	Level of Change
EN 81-3	Low
EN 81-10	Low
TS 81-11	High
EN 81-21	High
EN 81-22	Med
EN 81-28	Low
EN 81-31	Med
EN 81-40	Low

Affected Standard	Level of Change
EN 81-41	Med
EN 81-43	Med
EN 81-58	Low
EN 81-70	Med
EN 81-71	High
EN 81-72	Med
EN 81-73	Low
TS 81-76	Low

Affected Standard	Level of Change
EN 81-77	Med
EN 81-80	High
EN 81-82	Low
TS 81-83	Low
EN 13015	Low
EN 12015	Low
EN 12016	Low

Implementation until August 2017 (?)

Biggest evolution of the Lift Norms ever in the Elevator Industry

Copyright 2015 by Wittur. All rights reserved

Thank you for your time and attention!

WITTUR

WITTUR

Wolfgang Adldinger
Technical Corporate Director Lift Norms

Wittur is prepared for the future with the new EN 81-20/50

See you on the

safety in motion™

Copyright 2015 by Wittur. All rights reserved