

Good IAQ requires wide collaboration across the sector

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Industry group:

Lennart Østergaard, Veltek, Danmark

Britta Permats, Svensk Ventilation, Sweden

Erik Österlund, Svensk Ventilation, Sweden

Thor Endre Lexow Foreningen for Ventilasjon, Kulde og Energi, Norway

Ilkka Salo, Talteka, Finland

Juhani Hyvärinen, Talteka, Finland

Juhani Hyvärinen, Talteka

Eteläranta 10



Wellcomed collaboration across the sector to meet complex needs

- All users of buildings
 - Authorities
 - Building authorities
 - Health authorities
 - Academia
 - Research
 - Education
 - Industry
 - Architects, designers and consultants
 - Contractors
 - Manufacturers
 - Trade
- 
- Indoor air quality
 - Energy efficiency
 - Carbon footprint
 - Building and products
 - Use phase of the building
 - Easy to use
 - How to use
 - How to switch between "away", "at home" and "airing" states
 - Home and building automation
 - Easy to construct
 - Digitalization through the construction process and delivery chain
 - Maintenance and service
 - Heating and cooling, filtration



Ventilation tradition in Nordic countries is long

Same main requirements

- Similar climatic conditions
- Good ventilation and comfort requires mechanical solutions
- Energy efficiency plays an important role
 - A big part of the energy consumption is caused by the need to heat the supply air
 - Extract air energy content is high and recovering the energy has a key role in ventilation energy consumption

Are similar rules needed?

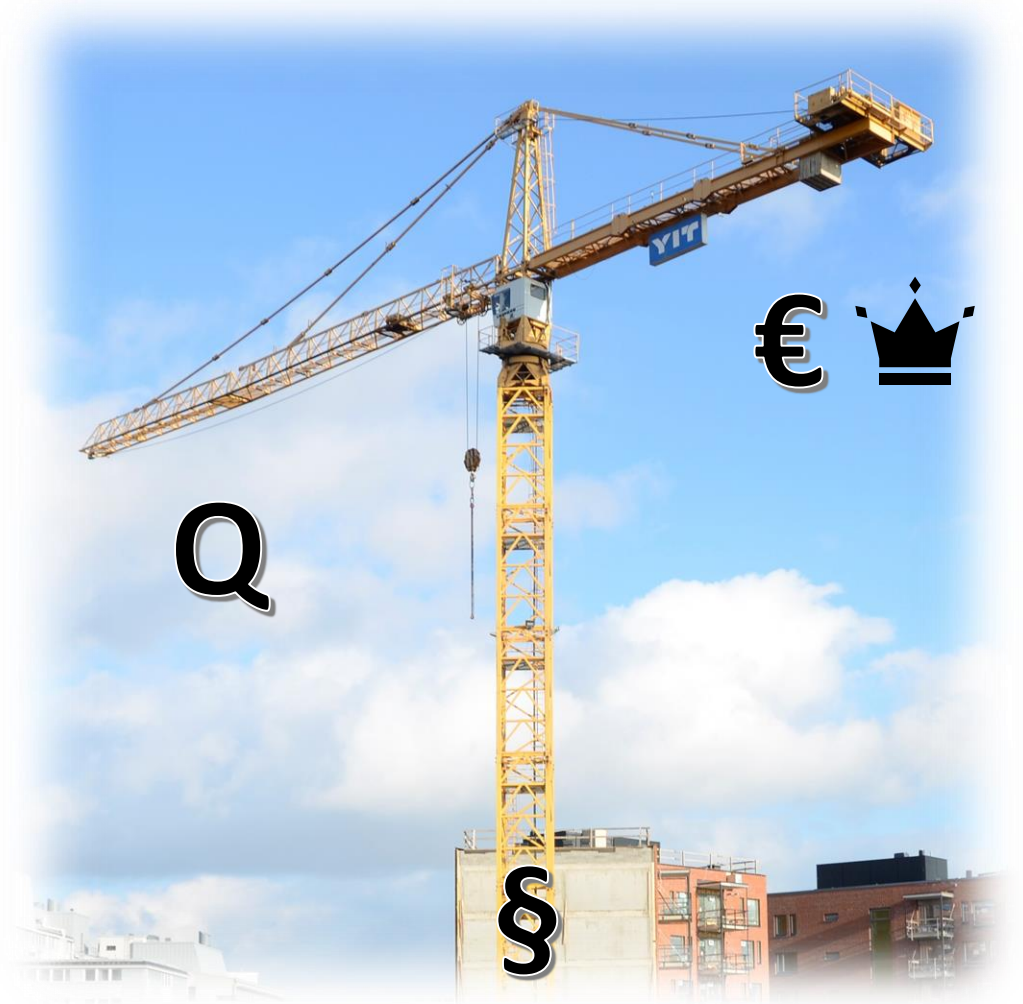
- **Inspiration** for regulation, positive competitive
- one of the key outcomes of the project
- Would similar rules make it possible to apply same solutions and products in "all Nordic countries"?
- What – Not how!





Cost of construction is a common concern

- Good quality does not need to cost more!
 - Indoor air quality difficult to judge by a user
 - Quality deviations often difficult to repair
 - How big is the productivity gain?
- Bigger market
 - Scalability of solutions
 - More impact with research and development
 - Product approvals and solution applicability
 - benefits of scale in production
 - Training of installers and users
- Clear and transparent regulation gives good foundation to develop products and solutions so that they would fit in a larger market.



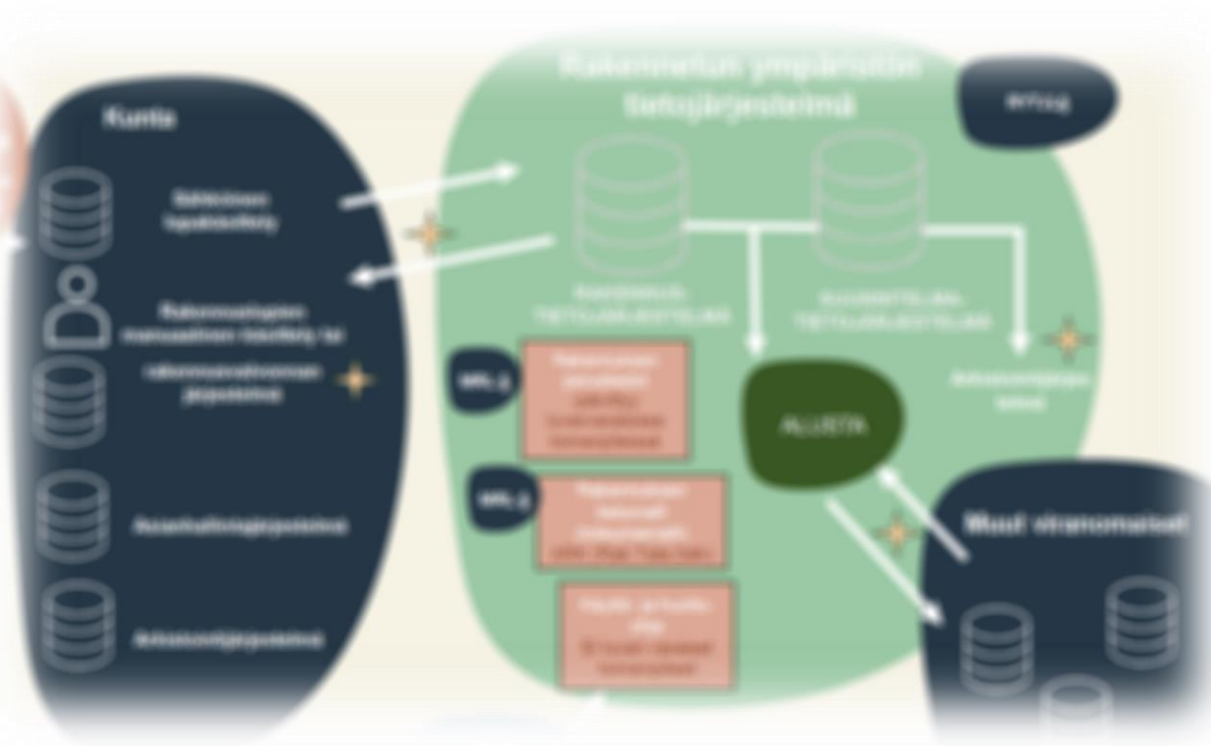


European level regulation

- Nordic countries belong partly to cold or arctic climatic zone
 - follow-up the European regulatory work
 - Expected to have applicable regulation in our environment
- Comparing level of regulation in other countries
 - If a solution works elsewhere does it work also in the Nordic countries?
 - If a solution works in Nordic countries could it be applied elsewhere?
- Good ventilation level requirements of the Nordic countries should be maintained also in the European regulation when justified
 - Health, noise, comfort, energy, ...
 - Building services have a key role in maintaining clean indoor environment where risk of infection is low.



Digitalization is a possibility to save costs during the life cycle of a building - in the delivery chain throughout to building management



- Common product information for design, trade and use
 - Product information templates
 - "One piece of information stored in one place only" as a major guideline
- Building information models
 - Digital twin for each purpose
 - Design, construction, maintenance
 - Indoor condition data model
- Risk of increasing the burden
 - Maintaining the data integrity from day 1
 - overlapping schemes for product approval
 - competing schemes for product assessment
 - E.g. EPD's and environmental product labels



Does it work?

- For an average building user it is almost impossible to "see" that the ventilation works – or if it doesn't work
 - Ventilation inspection or ventilation control
 - Obligatory or voluntary, automatic or manual
 - IAQ sensors and continuous monitoring
- Transparent requirements help
 - Certified product quality
 - Not a must to certify but a possibility to show quality characteristics reliably
- Minimal product regulation in ventilation sector
 - A product can be put to market in all countries
 - Some differences between the countries but not major ones





Thank you for your time

- More similarities than differences
- Instead of obstacles there seems to be a number of interesting topics for common activity
- How to encourage to learn from neighbours?
 - Learn from good practices and utilize learnings locally.
- Designers and consultant's voices could be louder in the co-operation
 - How about contractors, wholesales, and other trades ...
- How to respond to new challenges together
 - Covid pandemia
 - Climate change prevention and mitigation



Any questions?

Now through webinar chat or
later via Juhani.Hyvarinen@talteka.fi